THE LANCET.

VOL. II.] LONDON, SATURDAY, SEPTEMBER 17, 1842. [1841-42.

A COURSE OF LECTURES ON SYPHILIS.

DELIVERED AT THE SCHOOL OF MEDICINE, GROSVENOR-PLACE, ST. GEORGE'S HOSPITAL, SESSION 1841-42.

By SAMUEL LANE, Esq.,

Lecturer on Anatomy and Surgery, and Assistant-Surgeon to the LOCK HOSPITAL, LONDON.

Lecture XV.

The local treatment of primary syphilis continued; in the second or ulcerative stage of the disease; the importance of checking or arresting the production of the poisonous secretion, or of decomposing it as fast as formed. The treatment by escharotics; by decomposing fluids. The "vin aromatique" of M. Ricord, with or without tannin or opium. The necessity of subduing all inflammatory symptoms in the first instance.

The local treatment in the stages of granulation and of cicatrisation; the excess of the granulating process, and the persistence of induration, to be chiefly attended to. The application of mild escharotics and mercurial preparations.

The non-mercurial constitutional treatment of primary syphilis: does not delay the healing of the primary sore, except in cases accompanied by excess of deposition; increases the frequency but not the severity of the secondary affections. The non-mercurial treatment described.

The mercurial constitutional treatment of primary syphilis. Theory of the modus operandi of mercury: acts upon the organs of excretion; used for two objects—to lessen the liability to the secondary disease, and to expedite the healing of certain of the primary sores. Mercury will not only cure a present symptom, but will act as a preventive. Authors differ much with respect to the period at which the mercurial course should be commenced; the lecturer's opinion.

Gentlemen,—In the present lecture I propose to continue the subject of the treatment of primary syphilis in its regular form, and independent of its occasional supplementary symptoms which will be afterwards considered. I have already explained to you my reasons for dividing the primary sore or chancre into four natural stages, and have endeavoured to point out to you the characteristics of each, as well as the indications of transition from one to the other. I have also laid before you some general observations on the management of these cases, and have adopted the division of this part of our subject into the two heads, viz., first, of *local treatment*; and, second, of *constitutional treatment*.

The *local treatment* of primary syphilis I have hitherto considered in reference to the first stage only of the local sore. I now proceed to direct your attention to

The Local Treatment of the Second or Ulcerative Stage of Primary Syphilis.

It should be recollected that in this stage of the disease the poisonous ulcer is fully established; that its specific and contaminating secretion is being produced in large quantities; that a certain portion of the newly-generated virus is being daily, hourly, absorbed into the general system, through the media of the veins and lymphatic vessels, and that having once entered the system it has the power of reproducing a like poison there; again, that although the organs of excretion are at work continually to free the blood of the poison it is receiving, yet they may not be equal to the task (especially unaided by evacuant medicines) of preventing its accumulation in the system in sufficient quantity to interfere with the nutrition of the structures, and, consequently, to become manifest in the ordinary external signs of the constitutional disease.

You observe, then, how important it must be to diminish the quantity of this poisonous secretion, and *à fortiori* to arrest it altogether; but until this can be accomplished, that it must be highly desirable to remove it

or decompose it as fast as it is formed. In determining our local treatment in this stage of the disease, the above considerations must not be lost sight of; but it will be necessary at the same time to bear in mind that there is a great tendency to excess of inflammatory action, and that stimulating applications incautiously used, may be followed by phymosis, paraphymosis, or sloughing: distressing complications which, in all probability, would not have occurred under an opposite plan of local treatment.

The first consideration which naturally suggests itself is, whether the abortive treatment by escharotics or excision may not be adopted here as well as in the stage of origin of the disease. Undoubtedly there are many cases which admit of it, and in these it should be preferred to every other mode of local treatment. It may be accomplished by successive applications of a mild escharotic, such as the nitrate of silver, the sulphate of copper, or the nitrate of mercury, or by a single application of a more powerful one, such as the kali purum, the Vienna paste, nitric acid, the actual cautery, &c. The more severe proceeding would doubtless be the more effectual, inasmuch as it would at once destroy the contaminated part, and thus arrest the production of the poisonous secretion by which it is dreaded the constitution might be contaminated; it is, however, the least followed in practice, not that there exists any doubt of its efficacy, but the nature of the parts upon which the chancre is usually seated; the greater amount of suffering it involves; the fear of excessive inflammation; the difficulty of limiting the destructive action with exactitude to the extent of the parts contaminated, all tend to induce the surgeon as well as the patient to prefer the milder, though less effectual, plan. M. Ricord and Dr. Wallace both agree in advocating the employment of the nitrate of silver throughout the ulcerative stage. M. Ricord's words are, "Tant que le chancre restera à la periode d'ulceration, il faudra repeter la cautérisation avec le nitrate d'argent, aussi souvent qu'à la chute des escarres produites, on retrouvera, soit pour le fond ou les bords, les caractères qui appartiennent à cette période; mais, dès que la reparation aura lieu, on s'abstiendra de porter le caustique sur les parties en voie de guérison, pour en continuer l'emploie sur les points encore à l'état d'ulceration spécifique."

Dr. Wallace says,—"Let the practitioner use it (the nitrate of silver) boldly, and judge of its effects from his own observation. I repeat the word boldly, for it is only from the full and perfect application of it that he will derive all the advantage which this most useful remedy is capable of affording; while mischief may, and most probably will, result from employing it in a vacillating or trifling manner. Having chosen an appropriate case, let him, without fear, completely destroy the edge and surface of the sore, wherever ulceration exists; and let him steadily repeat the application of the caustic as often as may be necessary, or until the process of ulceration has ceased, and the actions of reparation have commenced. If he acts in this manner, the result will be of the most favourable kind, and no inconvenience whatever will arise."

M. Ricord alternates the use of the nitrate of silver with a vinous aromatic and astringent application, "vin aromatique," unless the ulcer is devoid of secretion and stationary, or the surrounding induration continues to increase. When, notwithstanding the employment of the "vin aromatique," the secretion from the ulcer continues abundant, he dresses it with a vinous decoction of tannin. Should the sore be painful, he has found it of advantage to add from eight to ten grains of the watery extract of opium to each ounce of the wine. Ricord's formulæ for the preparations above alluded to are—

For the aromatic wine:

℞ *Espèces aromatiques*, ℥iv;
Vin rouge, lb ij;
Alcoolat vulnéraire, ℥ij.

Faites macérer les espèces aromatiques pendant huit jours dans le vin; passez avec expression; filtrez, et ajoutez l'alcoolat vulneraire.

For the wine with tannin:

℞ *Vin aromatique*, ℥viij;
Tannin tres pur, ℈ij.

For the wine with opium:

℞ *Vin aromatique*, ℥viij;
Ext. gom. d'opium, ℈ss.

I have now laid down the principles which it appears to me should guide us in the employment of local remedies in the second or ulcerative stage of the uncomplicated primary sore. I have purposely quoted only two authorities—they are the first, however, in France and in this country; and they bear out most completely the views I have ventured to bring before you, and fulfil every indication which, in the first instance, I stated to you would be required, viz., either to destroy the source of the poisonous secretion, lessen its quantity, or to decompose it and render it inert, at the same time that we guard against encouraging inflammatory action.

A few words will now suffice to detail the local treatment I would recommend you to adopt in the ulcerative stage of primary syphilis. Should inflammation be present, that must be first combatted by constitutional treatment, by rest, by unirritating lotions, or emollient poultices. Leeches, as a general rule, should be avoided either upon or near the sore, on account of the liability to inoculation, for every leech-bite without extreme care will become a chancre. All inflammatory action having subsided, the nitrate of silver should

be used freely to the surface and edge of the ulcer; a piece of dry lint should now be applied rather larger than the ulcer, and retained in its position by some simple dressing, which will serve to prevent the lint from adhering to the edge of the ulcer. The eschar will, in all probability, have separated on the following day, and if there be no tendency to inflammation, and you feel assured that the specific action will return, the caustic may be reapplied; but if you are in doubt, dress the ulcer with some mild unirritating astringent, selecting those in preference which decompose animal secretions. It is remarkable that those preferred by most surgeons coagulate albuminous matter, which is always present in these secretions.

The information we most require to guide us here, has still to be sought by means of direct experiment; the great desideratum is to ascertain the least irritating remedy which will effectually decompose the secretion, and annihilate its poisonous qualities. M. Ricord tells us that the virus from a primary sore is not rendered inert by mixture with the urine, mucus, pus, saliva, sweat, or spermatic fluid, unless too diluted by them, but that an acid or alkali, *un peu concentré*, will entirely prevent inoculation, as will also wine, alcohol, and strong decoctions of tannin. The questions which immediately suggest themselves, and which, I trust, will soon be answered, are, How weak a solution of alcohol, of wine, of tannin, of acids, of alkalies, will destroy the infecting property of the venereal virus? Will solutions of other substances which possess the power of coagulating albuminous matter, such as the bichloride of mercury, or rennet, act in a similar way? Do many of our most useful local applications, solutions of nitrate of silver, of sulphate of zinc, of diacetate of lead, of sulphate of copper, of nitric acid, &c., act in virtue of this desirable property, namely, of rendering inert the virus secreted by a primary syphilitic ulcer? In the present state of our knowledge, I must advise you to select the applications which M. Ricord has ascertained to possess the requisite qualities alluded to; the strong decoctions of tannin, the "vin aromatique," either alone or with tannin, or opium, for which may be substituted any astringent wine, and the aromatic herbs* may probably be omitted, in many cases, with advantage. Having washed away the secretion of the ulcer with one of these fluids, or a combination of them, dress the sore by dipping a piece of lint in the fluid and applying it to the ulcerated surface; this should be covered by oiled silk, or some simple ointment to prevent evaporation, and the dressing should be frequently changed, every two hours, or even every hour.

A day will probably suffice to enable you to judge of the state of the ulcer. Its surface and areola must be carefully examined; should the surface be every where clean and free from the adherent lardaceous matter, or dingy brown colour, at the same time that the areola has become circumscribed to a mere red line, you may conclude that the ulcerative stage has ceased, and that of granulation commenced, and, consequently, that the caustic need not be reapplied; but if these changes have not taken place at every point, the caustic must be again had recourse to, sparing those parts of the ulcer, if any, where reparation has distinctly set in. Thus you will succeed in shortening this dangerous stage of the primary sore, and in rendering it least pernicious to the general system during its existence.

The Local Treatment of Primary Syphilis during the Stages of Granulation and of Cicatrisation.

Our object here is simply to expedite the healing of the sores. All specific action has ceased; the constitution is no longer jeopardised by the existence of the ulcer, and the general principles of surgery will guide us in the selection of appropriate local applications.

It will be necessary, however, to qualify the observations I have just made when the surrounding induration, which usually disappears during the granulating and cicatrising stages, still persists; for under these circumstances, as I have remarked in a former lecture, the poison appears to lurk in the indurated texture, and constitutional symptoms are likely to supervene. I am myself rather disposed to consider the persistence of the induration as a token that the blood is already charged with the syphilitic virus.

M. Ricord generally continues his favourite remedy, the "vin aromatique," throughout the stages of repair as well as of ulceration, unless contra-indicated by unusual symptoms.

Dr. Wallace, on the other hand, lays great stress on the efficacy of mercurial preparations in shortening the granulating stage, and in hastening the cicatrisation of the ulcer. He enumerates the mercurial applications which he is in the habit of using, mentioning them in an order agreeing with their stimulating qualities, each succeeding one, according to him, being more stimulant than its predecessor: these are,—calomel, calomel in lime-water, mercurial ointment, citrine ointment, muriate of mercury in lime-water, and muriate of mercury in distilled water.

Mr. Evans gives the preference to the sulphate of copper in the reparative stages, used as a stimulant, rather than as an escha-

* Rosemary, rue, sage, hyssop, lavender, absinthium, origanum, thyme, laurel leaves, the flower of the red rose, chamomile, mellitotum, and elder.—Langston Parker on Syphilitic Diseases, p. 85.

rotic, either by lightly touching the surface of the ulcer with it, or in the form of lotion, of the strength of half a grain to the ounce of water.

I shall now proceed to direct your attention to the two principal circumstances demanding especial attention, in reference to the local treatment during the granulating and cicatrising stages. The first is the tendency during the former to exuberance of growth in the granulations, to the extent of giving a raised and fungous appearance to the ulcer; the second is the persistence of induration in the latter, both during the progress of cicatrisation and after its completion.

For the first of these states, if accompanied likewise with surrounding induration, which will sometimes be the case, I should give a preference to mercurial applications, especially in the form of lotions, such as the lotio nigra, of the strength of from two to four grains of the chloride of mercury to the ounce of lime-water; or a lotion of the bichloride of mercury, of the strength of from one-eighth of a grain to a grain of the salt in the ounce of distilled water. Those who have no objection to ointments will find useful remedies in the unguentum hydrargyri nitratis, the unguentum hydrargyri nitrico oxydi, or simply in the unguentum hydrargyri diluted at first with from one to three parts of some simple ointment.

But when the granulations are simply raised without any surrounding induration, I prefer touching the surface of the ulcer lightly either with the nitrate of silver or with the sulphate of copper, daily, until the surfaces of the ulcer and of the neighbouring skin are on the same level; the mercurial remedies, however, act equally well here as when induration is present, but they are less cleanly applications, and less usually under the superintendence of the surgeon.

When the existing induration retards the healing process, or persists after cicatrisation, although we must principally trust to constitutional means, yet considerable advantage may be gained by the topical use of mercurial preparations. I generally employ under these circumstances a piece of lint dipped in the lotio nigra to the ulcer, kept in position by the unguentum hydrargyri, spread on the same material. To the induration remaining after the healing of a chancre, the mercurial ointment is the most convenient local application.

Should there be neither excess of granulation nor of induration during the reparative stages of the sore, I prefer mild astringent lotions to any of the remedies above mentioned. Lotions of the nitrate of silver, or of the sulphate of copper, answer exceedingly well.

In speaking of the destructive or ulcerative stage of primary syphilis, where the object was to remove or decompose the poisonous secretion as fast as formed, I recommended you to have the dressings reapplied every two hours at least; but in the stages of repair, especially when progressing favourably, I think it right to guard you against permitting them to be changed more than once or twice at most in the twelve hours: frequently, where there is but little secretion from the sore, once in twenty-four hours will be sufficient.

My next duty will be to enter upon the consideration of the constitutional treatment of primary syphilis, which is conveniently divided into the mercurial and the non-mercurial. I shall first direct your attention to

The Non-mercurial Treatment of Primary Syphilis.

In former lectures I have explained to you that it has been abundantly proved in this country and on the continent that all syphilitic affections, whether primary or secondary, may be cured without the aid of one particle of mercury. It appears that the healing of the primary sore, as a general rule, is but little if at all expedited by its administration: indeed, many surgeons maintain that it is retarded. M. Duvergie collected from different hospitals on the continent, in America, and in this country, an account of as many as fifty-nine thousand six hundred and twenty cases of primary syphilis, including, however, gonorrhœa and hernia humeralis. Of these twenty thousand two hundred and seventy-six were treated with mercury, and thirty-nine thousand three hundred and forty-four without that remedy. The mean period required for the cure of the former was forty-two days, for the latter only thirty days.

M. Ricord treated with mercury two hundred and ninety-two men, and without mercury five hundred and ninety-eight. It required forty-two days on an average to cure the first, and only twenty-eight days the second. Thus it appears that the indiscriminate use of mercury delays the healing of the primary disease by rather more than one-third the period required when that mineral was abstained from. It is, however, admitted by most of the advocates of the non-mercurial treatment, that in certain cases, those, for instance, accompanied by much induration, the treatment by mercury greatly shortens the duration of the primary sore.

Another important question is, how far the non-mercurial treatment of the primary symptoms influences either the frequency or severity of the secondary affections. I have already informed you, on the authority of Mr. Bacot, that secondary symptoms occur in the proportion of one case in ten, where no mercury has been used for the cure of the primary affection; whilst on the contrary, the proportion of such cases is only one in seventy-five where that remedy has been employed. It is, however, but fair to remark,

that the secondary affections, though so numerous under the non-mercurial treatment, were extremely mild in their character.

It will be as well to inform you here, that M. Ricord, Mr. Evans, and Sir R. Carmichael, as a general rule, abstain from the use of mercury in the treatment of all the primary sores which are destitute of the principal Hunterian distinction of a chancre, namely, the indurated base upon which it is situated. Dr. Wallace also objects to the administration of mercury in the destructive stages of primary syphilis, but strongly recommends it in the stages of repair.

We are warranted, then, in concluding that the advantages of the non-mercurial treatment in primary syphilis are restricted to the rather more speedy healing of the sore, except when induration is present, and to the milder character of the subsequent secondary affections; that the principal disadvantages are the longer persistence of the local sore when accompanied by induration, and the greater liability (in the proportion of seven and a half to one) to the occurrence of secondary symptoms. When, however, it is determined upon to adopt the non-mercurial mode of treatment, either from the prejudice of the patient, the peculiarity of his constitution, the presence of other diseases in which it may be desirable to abstain from the use of mercury, or from whatever cause, the following is an outline of the proceeding usually had recourse to. It consists simply in a judicious application of the general principles of surgery to the prominent symptoms which ordinarily attend the venereal primary sore. The horizontal position, confinement to the house, and in some instances to bed, by which the patient is removed from many extraneous causes of irritation and consequent inflammation, at the same time that the excretion from the skin is encouraged by the absence of those sudden changes of temperature that the patient must necessarily be subjected to when he is allowed to leave his apartment. Abstinence from stimuli, low or very moderate diet, diaphoretic and aperient medicines, in some cases loss of blood, the warm bath, and other appertenances of the antiphlogistic and evacuant plan of treatment; while the local means already pointed out are carefully attended to, with the exception of the mercurial preparations which might enter the system by absorption from the local sore, and thus interfere with the non-mercurial constitutional treatment strictly so called. Sarsaparilla, guaiacum, the hydriodate of potash, and many other remedies, much depended upon in the secondary affections, are not usually administered in the non-mercurial treatment of primary syphilis. This I consider to be a great omission, and I strongly recommend you, should you be obliged to forego the use of mercury in the treatment of any cases of primary syphilis, to have recourse to the above remedies as the best means open to you of preventing the occurrence of secondary symptoms.

The Mercurial Treatment of Primary Syphilis

May be considered in the light of a mere addition of the administration of mercury to the simple plan of treatment just detailed.

But many questions of extreme importance immediately suggest themselves, having reference to, the object to be gained by its employment; the principle upon which it acts; the period at which it should be commenced or omitted; the selection of the preparation to be employed; and the quantity required; to which I must now direct your attention. But before entering upon the consideration of these questions, I think it necessary to call to your recollection some opinions peculiar to myself, fully explained to you in former lectures, namely, that I consider the poison of syphilis as obedient to the same laws which regulate the action of other poisons, not only when they have once entered the animal system, but also in their mode of introduction and elimination. I allude here to the influence of quantity arising from the accumulation of the poison, by its continual absorption from the surface of the primary sore during its destructive stages, and the necessity of its becoming accumulated in the system to a certain amount, like digitalis, colchicum, or mercury, before it can produce its most marked effects. Again, that the organs of excretion possess great power to remove this as well as other poisons from the system; and that our most powerful antisyphilitic remedies, mercury, hydriodate of potash, guaiacum, sarsaparilla, produce their beneficial effects, by acting principally upon these organs.

This theory of the remedial action of mercury and sarsaparilla in syphilis was first suggested to me by my friend Mr. Hutchins, of St. George's Hospital, fourteen years ago, when I was house-surgeon to that institution, and my own observations have since that period tended only to confirm the soundness of the reasonings on which the opinion of this gentleman was then supported.

My object, then, in administering mercury during the existence of the primary sore, is not so much to expedite its cure as to stimulate the organs of excretion to eliminate the syphilitic virus from the blood as fast as it enters that fluid, so as to prevent its accumulation, and ultimately to eradicate it from the system.

You will perceive that this view would lead me to consider any remedies which act powerfully on the emunctories as anti-syphilitic; and if I were compelled to treat syphilis without mercury, these are the class of remedies I should with confidence have recourse to. But I would also administer mercury for the purpose of hastening the reparative process of the primary sore when

that was impeded by increased deposition, either in the form of over-abundant granulations or of surrounding induration, or of both these states.

I would here venture to suggest that the power possessed by mercury or by hydriodate of potash, to promote absorption, results from their evacuant effects, the newly-deposited material being greedily taken up to meet the waste, especially when the ingesta are sparingly supplied. And, on considering the subject further, you will, I think, find that all our remedies which are said to stimulate the absorbents are powerful evacuants; nor do I imagine we should be far wrong in asserting, on the other hand, that all evacuants excite the absorbents.

The supposed specific powers of mercury and of hydriodate of potash in promoting absorption and in curing syphilis, then, I am inclined to attribute not to any property peculiar to these remedies, but to powers which they possess in common with many others, but in a pre-eminent degree. Lastly, I look upon all evacuants as powerful aids in removing poisons from the blood, and therefore as anti-syphilitic.

Before I enter upon the consideration of the period at which the mercurial course should be commenced or omitted, I deem it to be my duty to warn you against what appears to me to be an erroneous and very injurious doctrine with respect to the antisyphilitic powers of this medicine. It is an error apparently founded partly upon the obsolete Hunterian notion that mercury was absolutely indispensable for the cure of the primary sore, and partly upon the frequent recurrence of attacks of the secondary affections, after severe courses of mercury, but continued for too short a period. I will explain it to you in the words of a recent writer on the Poison of Syphilis: speaking of the mercurial treatment, he says—"Mercury is not a specific antidote capable of neutralising the poison of syphilis, but merely an agent capable of curing a present symptom. Indeed, it is quite singular with what rapidity one secondary symptom often follows another, when the antecedent has been treated with mercury even to profuse ptyalism." If we admit this doctrine, you will perceive it would be no longer consistent to administer mercury as a preventive against future symptoms, but simply to treat them as they arose. Now I have already told you that my principal object in giving mercury during the primary symptoms, is to lessen the liability to the constitutional affections; and as to the period at which I would advise you to commence or discontinue its use, I am guided by a firm conviction of its preventive as well as curative powers: preventive, inasmuch as, according to my views, mercury would stimulate the emunctories to eliminate the poison as fast as it entered the system, and thus prevent its accumulation to an injurious extent.

You will find great differences of opinion even amongst modern writers on this disease, as to the period at which they would begin the exhibition of mercury in primary syphilis. In the first place, M. Ricord, Mr. Evans, and Sir R. Carmichael abstain from its use, except in the indurated form of primary syphilis, in which the two latter gentlemen would recommend its use as soon as the character of the sore could be distinguished: the former gentleman, on the contrary, would not commence it till he found the non-mercurial treatment fail to remove the surrounding induration, either before or after cicatrisation.

Dr. Wallace avoids having recourse to mercury during the two first or specific stages of primary syphilis, he, however, exhibits it immediately the reparative stages have set in. He says,—

"When it appears that the stage of reparation has commenced in all parts, the local and constitutional treatment should in general be essentially mercurial." "In fact, under the judicious use of mercury, the cicatrisation of primary syphilis often follows the stage of ulceration with such rapidity, that there is not time for the reparation of lost parts by the process of granulation; and the ulcer is therefore healed with loss of substance."

Mr. Bacot and Mr. Mayo recommend the mercurial treatment to be adopted as soon as they become convinced of the venereal character of the sore. Mr. Mayo thus expresses himself,—"It should be commenced as soon as the character of the disease is determined. It is probable that the delay, even of a few days, materially lessens its efficacy towards preventing constitutional lues."

My own advice to you will accord more with the opinions of the last two gentlemen, especially with Mr. Mayo's, which I have just quoted: and you know that the principles which I have endeavoured to inculcate, would lead me necessarily to this line of practice. The instant the poisonous matter is generated, and remains in contact with the living tissue, some of it of necessity must be imbibed, that is, if our modern physiological notions with respect to the process of absorption be correct. I should, therefore, be led to administer in all cases, and without delay, the remedy which I had the most confidence in as a general, powerful, and, when judiciously used, safe evacuant; and in my mind such is the character mercury pre-eminently deserves; and next to that, the hydriodate of potash.

PARISIAN MEDICAL REPRESENTATIVES.

M. Bouillaud has been thrown out of the Chamber of Deputies, by a ballot arising out of an informality in the number of resident members required in each department.

ON THE

MORTALITY OF THE MEMBERS OF THE AMICABLE AND EQUITABLE ASSURANCE SOCIETIES.

By T. R. Edmonds, Esq., London.

The question of the influence of age on the mortality of mankind is one of modern origin. Until the end of the seventeenth century the existence of such influence does not appear to have been suspected. The general opinion previously entertained by the most civilised classes of mankind apparently was, that the rate of mortality at all ages was constant. Life they regarded as uncertain, and equally uncertain at all ages. This opinion, however erroneous it may now appear, was not merely speculative, for at the commencement of the eighteenth century, when institutions for the assurance of lives first began to exist, it was the common practice to charge one rate of premium (about 5 per cent. per annum) for all lives, without distinction of age. The "Amicable," which is the oldest existing life-assurance office, was established in 1707, and then offered the same benefit at death to all persons without distinction of age, in consideration of the same annual premium payable during life. This society subsequently limited the admission of its members to ages between 12 and 45 years. With this limitation the Amicable continued to receive members on its original erroneous plan, down to a period so recent as the year 1808.

The establishment of the "Equitable" in the year 1762, with rates of assurance graduated according to age, was the first remarkable event in the progress of the principle that human mortality is influenced by age in a specific degree, or according to a fixed and determinate law. The first of all tables of mortality having been published by Dr. Halley, in 1692, there had thus intervened a period of seventy years from the theoretical establishment of a new principle to its adoption in practice. So limited, however, had been the progress of the new principle in the minds of the public during the seventy years, that the new scheme of the Equitable was pronounced visionary and unsafe by the law-officers of the Crown, and the application of the society for a charter was refused, although their rates of premium at the outset were twice as high as they are at the present day.

During the seventy years following the establishment of the Equitable many additional observations were made, by which was established, beyond the possibility of dispute, the fact of the influence of age on the mortality of mankind. But nothing resulted from these observations beyond the conclusion, that in a certain population, at certain ages, the same or similar degrees of mortality recurred. No attempt, or no successful attempt, at least, had been made to connect together, by any law or principle, the rates of mortality at successive ages in the same or in different populations. All these observations, however they might differ in the classes of life observed, agreed in showing that in all populations the rate of mortality, which is very high immediately after birth, rapidly diminishes thence until the age of about 9 years; that it then slowly increases until the age of about 55 years; and that after the last age the mortality rapidly increases until the extinction of life. The fact now stated as common to all tables of mortality was announced by Dr. Price more than sixty years ago, yet the hint thus conveyed of an important truth was followed by no practical result. Until the year 1832 no person had published a table of mortality founded upon observation, in which there was any apparent or expressed bond of connection between the mortality at one age and the mortality at any other age.

In the year 1832 I published a complete set of life-assurance and annuity tables, all of which rested for their basis on mortality tables, constructed on one common principle, which is, that there are there well-marked periods of human life over which preside three specific constants which I had determined. From birth to the age of about 8 years, the constant is 32½ per cent., being the rate at which the mortality decreases for each advance of one year in age; from 12 to about 55 years of age the constant rate of increase in the mortality is 3 per cent. for each year of age; after 55 years the constant rate of increase is 8 per cent. for each year of age. At the time of publishing these tables I produced evidence of the universal applicability of these constants to all tables of mortality whose credit was established. I made also a special selection of one particular observation, that by Dr. Heysham, at Carlisle, which then enjoyed a higher reputation than any other, and from this observation I constructed a table (village mortality) in agreement with my theory. I then compared the results of this theoretical table with the results from the table of Mr. Milne, founded upon the same observation; and from their coincidence, almost exact throughout, was enabled to show that so far as regarded the Carlisle observation my theory was true, if Mr. Milne's table was a true representation of that observation.

Since the year 1832 there have been received by the public three new and valuable statements or observations of mortality in England,—all of which accord well with my theory of mortality and my published tables. The first was a statement of the number of registered deaths in England and Wales, with distinction of ages, for 18 years, to the 31st December, 1830. This statement of the

dying and their ages, in combination with a previous statement or enumeration of the living population and their ages made in the year 1821, constituted the first complete observation which had ever been made of the mortality of the total (or any large portion of) population of England. The result of this observation was first published in THE LANCET, Nos. 640, 641 (Dec. 1835). The resulting mortality of the English population was not found materially to differ from the mortality long previously observed of the population of Sweden and Finland, except in one remarkable particular, regarding that of children. The mortality under 5 years of age was found to be in England more than one-third part less than it had been supposed to be, or than it had ever before been observed in any population. This reduction in the relative mortality of children, the mortality of adults remaining stationary, or nearly so, was anticipated by me; and I had previously published tables which for ages under 10 years differed materially from all preceding tables and observations of mortality. The difference between my new table and previous tables did not consist merely in a proportionate reduction of the mortality at all ages under 10 years; for, in order to make the diminution in infancy accord with my theory, it became necessary to reduce the mortality from birth to 5 years of age, in a much greater proportion than the mortality from 5 to 10 years of age, and thus to change the usual relative proportions between the mortalities at these two intervals of age. The reduction made in the manner indicated has been found to be in agreement with the observation of the mortality of the population of England, and its correctness, as well as that of the theory on which it was founded, has thus received the strongest confirmation. The discrepancy also at ages under 10 years, between the English and all other observations of mortality, was thus explained before the existence of such discrepancy could have been known.

The second of the observations alluded to, and which appeared nearly simultaneously with the preceding, is that made on the mortality of the members of the Equitable Assurance Society, from its commencement in 1762, to the 1st January, 1829. At the time of its publication this was by far the most valuable observation which had been until then made on the mortality of any class of people. In the case of ordinary observations on the mixed population of a district or territory, the information obtained rests generally upon the unsupported statements of their ages made by a multitude of individuals. Although the approach to truth of these statements in the aggregate will hardly be denied, yet their accuracy may fairly be questioned, when it is considered that there is little or no check on any wilful misrepresentation. The value of these general observations on mortality rests principally upon the probability that the errors with which they abound being in different directions, will reciprocally destroy or neutralise one another, leaving a result nearly as correct as it would have been if there had been no error in the individual facts. This remark is also applicable to errors of enumeration of the living, or of registration of the dying, which may also be presumed to balance one another. These defects, to which observations on the mortality of general populations are liable, do not exist in observations on their members made by life-assurance offices, for the ages of all members are certified, and any error or false statement subjects the member to the forfeiture of his policy, together with all the premiums which have been paid. Any defect also in the registration of deaths, or in the enumeration of the living, is highly improbable, and next to impossible; for the death of a member, or the fact of his continuance as a member, living in any year, cannot fail to be recorded in the office-books. If a member dies, there will be entered at that time payment of the claim under his policy; if he continued to be a member during any year, that fact will be shown by his having paid his premium during that year to the office: for these reasons the observations on the mortality experienced in life-assurance offices (to which life-annuity offices may be added) are much more valuable, as correct registries of facts, than observations on the mortality of general populations can be expected to be; in the one case the alleged facts being supported by evidence, in the other case such support being wanting.

There is, however, one defect to which most observations on the members of assurance or annuity societies are liable, which consists in the members not being average lives, but having been at their admission selected as better than average lives of the same age and station. The effect of this selection is to depress below the average the mortality at every age of newly-admitted members. This diminution of the mortality at any age, which is proportional to the recency of admission, renders useless any observation on the mortality of the total of members indiscriminately: for the mortality at any age will be dependent on the proportions of newly and anciently-selected lives, entering into the formation of the aggregate. It is only within a very recent period that any account has been taken of the disturbing effect of selection on the laws of mortality. It was formerly supposed that a good law or table of mortality must be true under all circumstances, and be independent of any agency of man. It is now becoming extensively known that it is by no means difficult to distinguish good from bad lives, and by collecting the good lives, or those better than average lives, thus to reduce at any age the mortality of the selected class below that of

the larger class of people from which the selection has been made.

With a view to obviate the defects just pointed out, the observation on the mortality of the members of the Equitable, from its commencement in 1762 to Jan. 18, 1829, was made according to a new plan, the object of which was to afford the means of separating at every age the mortality of members admitted at one year of age from the mortality of those admitted at any other year of age. By this new plan, a statement was made in detail of the mortality at each year of age as suffered by each class of members admitted in any of the preceding years of age. For example, in the 50th year of age, not only was the total mortality of all the members in that year of age stated, but the mortality in that year was separately stated of those who had been admitted in their 49th, 48th, 47th, or any lower year of age. Materials were thus supplied for the first time, whereby might be appreciated the disturbing effect of selection at different ages. These materials were not, however, applied by Mr. Morgan, the actuary of the Equitable, to the purpose for which they were appropriate; he confined himself to drawing conclusions from the aggregate mortality at different years of age, in the same manner as he would have done if the new distinction of years from admission had not been introduced. Excepting myself, I am not aware that any person has made any attempt to apply the new materials supplied by the Equitable to the purpose to which they are specially adapted. In THE LANCET of October and November of 1837, I have given the results of the observation, distinguishing at the same ages the mortality of those who had been members less than 5 years from that of those who had been members from 5 to 10 years, or from 10 to 15, or from 15 to 20 years, &c. &c. From these results it appeared that the mortality at any given age was greatly dependent on the time elapsed since admission, and that it increased, as that time increased. As the form in which I have given these results has since appeared to me capable of some improvement, I have availed myself of the present opportunity to recast my observations and calculations on the materials supplied by the Equitable; and I now present the reader with a new series of results founded upon the published experience of that society. Although the present results are derived from a new investigation, they will be found to be the same in substance with the results already published. The chief difference is in the classification made of the facts, the present being thought more suited for comparison with other observations of the same nature.

We come now to the third of the important observations on human mortality which have been made during the last ten years, which is, the observation published a few months ago by the AMICABLE Life-Assurance Society, of the mortality experienced by its members during thirty-three years, from the 5th April, 1808, to the 5th April, 1841. The chief value of this observation, like that of the Equitable, consists in the mortality of the members admitted at each year of age being separately stated, from their entrance to their departure or death. The actuary of the society, Mr. Galloway, has not, however, attempted to make any use of the ample details collected, with the view of ascertaining in what degree selection might have affected the mortality at different ages. Indeed, Mr. Galloway follows the example of Mr. Morgan in this respect; both contenting themselves with laying before the public the rude materials of what may be valuable information, but leaving to others the task of finding it out. However much the materials published by Mr. Morgan and Mr. Galloway may excel in value all previously published, the results published by them differ in no respect from the results of materials of the most ordinary description.

Before proceeding to describe the results of the present observations of the Amicable and Equitable, it may be well, as a preliminary step, to say a few words as to the mode in which observations of this kind are made. All such observations consist of aggregations of lifetime and correspondent deaths, both distinguished according to age. The elements of the observation in each individual case are (1), the age at admission; (2) the duration of membership (and, consequently, the age at departure); and (3), the mode of departure from observation, whether by death, by voluntary secession, or by having been a living member at the termination of the period of observation. When these three things are known, nothing more is requisite in each individual case. What remains is, to collect together for each year of age all who have lived through that year, all who have died in that year, all who have discontinued their assurances in that year, and all who were living in that year when the observation terminated. If it is desired to distinguish at any age the mortality of members who were admitted in different years of age, it will be necessary to divide the foregoing aggregates into two or more parts, separating, for instance, the observed mortalities of those who had been members less than five years, and those who had been members more than five years, which separation can always be made in observations detailed like those of the Amicable or Equitable. From these materials so collected the mortality for each year of age may be accurately determined, which is the object of the observation.

An example will render this more clear. Let us suppose the year of age under observation to be the 46th, and let us also suppose that it has been observed that exactly 1015

members had completed their 45th year of age, and that exactly 973 members had completed their 46th year of age whilst belonging to the society. There will thus be a decrement of 42 in the 46th year of age, which decrement we may suppose made up of 12 deaths, 14 voluntary departures, and 16 living in that year of age when the period of observation terminated. These 42 who have departed or passed from observation in their 46th year of age, will upon an average each of them have belonged to the society one-half of that year, it being equally probable that as many will have departed in one month as in another month of that year, or that as many will have lived more than half of the year in the society as will have lived less than half of the year. The departed members will have lived together (in the society) the half of 42 years or 21 years, which last number is to be added to 973, or the number of entire years of life which had been observed in the 46th year of age. In that year of age there will thus have been observed a total of (973 + 21 =) 994 years of life, and a correspondent number of 12 deaths. The proportion of 994 to 12 just arrived at, expresses the relation between the constantly living and the dying of the supposed population between the ages of 45 and 46 complete years, and is, in fact, the simplest and most correct form of stating the result of the observation for that or any year of age. For the purpose of framing tables of mortality, however, the most common and advantageous mode of expressing the mortality observed in any year of age is by a comparison of the number dying during any year of age, with the number alive at the beginning of that year of age. Taking the example before cited, 973 having been alive throughout, and at the end of the 46th year of age there will have to be added thereto 12, the total number of deaths, together with 15, being the half of those who passed from observation alive during the 46th year of their age, and there will be found 1000 as the number completing the age of 45 years, out of whom 12 deaths occur before the completion of their 46th year, yielding a percentage of 1.20 or 1¼ for the year. The result just arrived at differs in form only from the result before arrived at, expressing the relation between the constantly living and the dying in the same year of age. The advantage of the latter mode of expressing the result, consists in the facility which it affords for the tabulation of the results; the proportions surviving from any given year of age, at successive yearly or quinquennial intervals, being hence most easily deducible. When from any observation the proportions surviving from year to year of age have been successively obtained, and when from these proportions have been deduced the similar proportions for periods of five years of age, there will have been obtained all the information which the observed facts are capable of yielding.

The published observations of the Amicable and Equitable are the same in form, although there exists some difference in the mode of adjustment of the mortality for fractional years of age. Since the admissions into a society do not take place exactly at the completion of any year of age, but occur, taking one with another, at the middle of the year of age, it was necessary to contrive some method whereby these fractions of years might be made to disappear. Mr. Galloway's plan of proceeding has been to assume that all who entered in any year of age during each year of the observation, entered at the middle of that year of age. Having completed his observation for successive ages, reckoned from the middle of one year to the middle of the next, he regains the usual division of age by taking the mean of each two successive fractional years of age. For example, the mortality of the 47th year of age, or from 46 complete years to 47 complete years, is derived by adding together the mortalities of the years of age from 45½ to 46½, and from 46½ to 47½, and dividing the sum by two. Mr. Morgan has adopted a different plan from that just described. He assumes that all who have been admitted during any year of the observation, in any specific year of age, will have completed that year of age at the end of such year of the observation. Having made this assumption, he disregards any mortality occurring in the fractional part of the first year of admission, and commences the observation from the beginning of the ensuing year when the age is expressible without fractions of a year. For example, if a member had been admitted in the 45th year of age in any part of the year 1821, he will have been regarded as having completed his 45th year, or as being exactly 45 years old on the 31st December, 1821, and for the purposes of the observation no account will have been taken of this member before the 1st January, 1822. Although, as I have learned from inquiries, this is the mode of proceeding adopted by Mr. Morgan, yet there is no statement to this effect published by him. In the absence of such statement I had concluded that his plan was the same as that since adopted by Mr. Galloway, and that the ages given in the marginal columns were the office ages, and not the true or corrected ages; and in consequence the results which I have given in THE LANCET, October and November, 1837, correspond to ages half a year greater than the marginal ages of the tables there given. With this correction, the tables which I then gave of the Equitable experience, are in agreement with the tables which I now give.

In its principal feature, the arrangement which I now make of the facts observed in the Amicable and Equitable, is the same as that which I adopted for the Equitable in

the year 1837. I allude now to the separation from each other of the mortality suffered by members of less than five years from that of members of more than five years' standing. The result of the observation now made on the members of the Amicable fully confirms the propriety of such distinction being drawn. For in the Amicable, as in the Equitable, it is found that among members of more than 5 years' standing, the mortality has been as high and as regular as it is in tables of mortality highest in repute; whilst for members of less than 5 years' standing, the mortality has been lower and more irregular than that indicated by any table of mortality.

The results deduced from the present observation of the members of the Amicable and Equitable Assurance Societies will be found exhibited in a concise and complete form in the four tables subjoined. In tables (1) and (2) are presented the principal results, together with the facts on which they are based, without regard to any theory or peculiar medium of view. In tables (3) and (4) are presented for comparison results of combinations of the same facts, and results flowing from the adoption of a specific theory of mortality; the object of the comparison being to show that the two series of results, actual and theoretical, are almost coincident at all ages, and that they do not differ so much from one another as do generally the series of actual results, and the series of adjusted results of calculators of mortality tables from observation. In all these four tables the divisions of age observed upon are the same; the intervals of age are quinquennial; and the commencement or termination of any interval is at one of the ages 30, 35, 40, &c. &c., or 90 complete years. In all the four tables, also, the results express exact or determined relations between the numbers living at the beginning of any quinquennial period of age, and the number, as reduced by death, at the end of that period. In the first three tables it is stated how many died in passing through each quinquennial interval of age out of an assumed number of 100 alive at the beginning of the same interval. In table (4) a constant number living is assumed at a given age, which number is successively reduced at each quinquennial stage, in proportions previously indicated. In the first three tables the proportionate mortality in each quinquennial interval of age is stated independently of the mortality at preceding or succeeding intervals of age; in the fourth table, the numbers expressing the survivors (and indirectly the mortality) at successive intervals of five years of age, form a connected series, of which any two terms, distant from each other two or more intervals, express by their difference the total mortality suffered at all the intermediate intervals of age.

On inspection of tables (1) and (2), it will be immediately seen that in the Amicable, as in the Equitable, the mortality at any age increases with the duration of membership; that the mortality of persons of a given age who had been members from 5 to 15 years, was considerably greater than the mortality of those who had been members less than 5 years; whilst the mortality of those who had been members more than 15 years, was greater than that of those who had been members from 5 to 15 years. In the Amicable, the difference between the mortality of the first 5 years of membership, and the mortality of membership exceeding 5 years, is considerably greater than it is in the Equitable. In the Amicable the proportion of the former to the latter is that of 2 to 3 nearly at all ages; in the Equitable, the proportion generally is that of 3 to 4 nearly; that is to say, in the Amicable, at given ages, the mortality of the older members exceeds that of new members by 50 per cent.; in the Equitable this excess is about 34 per cent. It will be observed that in the two tables the successive numbers in column (1) (applicable to members of less than 5 years' standing) do not increase regularly with the age (as they do in the other columns), and that at one period they decrease instead of increasing with the age. In column (1) of both tables the mortality is at a maximum between the ages of 35 and 40 years; from which quinquennial period it decreases slowly, or is almost stationary until the age of 50 years is reached. From this it may be inferred that the effect of selection in reducing the mortality, increases from 35 to 50 years of age; or that it is more easy to distinguish good from bad lives between 45 and 50, than it is between 35 and 40 years of age.

What has just been stated will serve to explain in a great measure two extraordinary and contradictory statements made by Mr. Galloway and by the "Government calculator," respecting the rate at which the mortality increases below the age of 50 years. Both of these statements are equally at variance with the results of previous observations; but the variation of one statement is in an opposite direction to that of the other statement. According to the Government calculator, the mortality between the ages of 35 and 50 years does not increase with the age, but is stationary. According to the statement now made by Mr. Galloway, the mortality between those ages increases 6 per cent. for each advance of one year in age. The truth lies exactly half way between these two contradictory statements, the true rate of increase between those ages being 3 per cent. for each year of age. The erroneous inference of the Government calculator probably arose from applying generally what is strictly true only of persons who had been members or annuitants less than five years; the proportion of such newly admitted annuitants to the total existing annui-

tants under the age of 50 years, having been so great as to give to the resulting mortality of the total a form nearly resembling that of column (1) in the tables of the Amicable and Equitable. The erroneous inference of Mr. Galloway arises from confounding together the mortalities in columns (1), (2), and (3), in neither of which columns separately does the mortality below 50 years of age increase more than 3 per cent. for each advance of one year in age. The first part of Mr. Galloway's table consists wholly of the facts belonging to column (1); the last part of his table consists wholly of the facts belonging to column (3). It has already been seen that at any given age the mortality in column (3) exceeds that in column (1) by at least 50 per cent. It is hence manifest that Mr. Galloway's table of mortality will express not only the increase due to the increase of age, but will also express the increase consequent on the passage from the mortality of column (1) to that of column (3), being an excess, ultimately, of more than 50 per cent.

The classification of the results of observation on the members of the Amicable and Equitable, as exhibited in columns (1), (2), and (3), of tables (1) and (2), with the view to show the increase of the mortality at any given age, according as the time from admission increases, is new, and, I believe, has never been made by any person but myself. The reader may now learn with some surprise that the information contained in column (4) of the same tables is also new, and not to be found elsewhere; although the numbers given in the column are merely an exact statement of the results of the total observed facts in the Amicable and Equitable, without any distinction of duration of membership. Neither Mr. Morgan nor Mr. Galloway has thought it necessary to present any such statement of actual results wherewith the reader might compare his statement of artificial or adjusted results. The more valuable statement has been omitted for the sake of the less valuable; instead of facts, the reader is presented with opinions under the semblance of facts. One example will suffice to show how erroneous may be the conclusions drawn from such statements of opinions and facts intermingled. The example will be drawn from a general comparative table of results from various laws of mortality given by Mr. Galloway in the last page of his pamphlet. This table has a very imposing statistical appearance; it is, nevertheless, true, that out of the multitude of numbers contained, there is not one expressing an observed fact. In this table the mortality (among others) of the Equitable and Amicable are compared. It is there stated that out of 100 alive at the age of 50 years, the numbers dying before the completion of the age 55 years were,—10.07 in the Amicable, and 8.41 in the Equitable; that is to say, the mortality at this age is alleged to have been 20 per cent. higher in the Amicable than in the Equitable. The truth is, however, that the observed relation at this age was the reverse of that stated, the observed mortality in the Amicable having been 5 per cent. less than the observed mortality in the Equitable. The discrepancy has arisen from a difference of opinion in the framers of the tables compared. To suit his theory of adjustment, Mr. Galloway found it necessary to *add* 11 per cent. to the number given by observation; whilst, on the other hand, Mr. Morgan, for a similar reason, found it necessary to deduct 11 per cent. from the number observed by him. I may be excused for here remarking in passing, that in order to render my theory of mortality consistent with the facts observed in the Amicable or Equitable, I have in no case found it necessary to deviate so far from observation as Mr. Morgan and Mr. Galloway have done in the instance now cited.

In tables (3) and (4) are given the final results of the observations on the members of the Amicable and Equitable, founded upon all the facts observed, exclusive of those in the first five years of membership. Collaterally with these results are placed, for comparison, similar results obtained from two theoretical tables; which two series of results are very nearly coincident, one with the other, throughout their whole extent. The two theoretical tables used are those which I have published under the names "Village Mortality" and "Mean Mortality;" the latter being my chief table, and serving as the foundation of an entire series of annuity tables at various rates of interest. The connection between the two tables is of a very simple nature, the mortality of the latter being at every age exactly 20 per cent. greater than that of the former; in both tables the mortality increases at the same rate during the same periods, viz., 3 per cent. for each year from 12 to 55 years of age, and 8 per cent. at all ages above 55 years of age. The village table is identical with what is usually known as the Carlisle table, at least it is so with the allowance made of a most insignificant deviation from the presumed facts observed,—a deviation necessary to render these facts consistent with my theory of mortality. This table represents the lowest mortality ever alleged to have been observed. Believing that, if so low a mortality exists any where, it will be found in a village population and not in a town population, I have thought it right to designate it as village mortality. On inspection of columns (1) and (2) of table (3), it will be seen that the results of this village table closely coincide with the results of the Amicable observation for a period of fifty successive years of age, being the whole extent of the observation when the facts are sufficient in number to serve as a basis, or probably correct index of the truth. The coincidence here

spoken of is in degree twice as close as that of Mr. Galloway's adjusted table with actual observation. The average deviation of Mr. Galloway's table from his observed facts, during the ten quinquennial stages from 40 to 90 years of age, is 5¼ (5.80) per cent.; the corresponding average quinquennial deviation of the village table above mentioned from the fact observed is only 2½ (2.63) per cent., being less than one-half of Mr. Galloway's deviation from the facts.

For a period of fifty successive years the village table is coincident with the observation of the Amicable; the coincidence is not, however, age for age, but the age in one case is always three years greater than in the other case. The observed fact in the Amicable at any given age agrees with the mortality indicated by the village table at an age three years greater. The ages 40, 52, and 90 years in the Amicable, correspond with the ages 43, 55, and 93 years in the village table; consequently the mortality in the Amicable at any age above 55 years, is 26 per cent. greater than the mortality indicated by the village table at the same age; this excess being the increase in three years when the increase for one year of age is 8 per cent. according to the theory.

The coincidence of the Amicable observation with the village table, year for year, at ages differing constantly by three years, is a fact deserving special notice, inasmuch as the age of 55 years in the village table is a remarkable epoch, which will render the corresponding age of 52 years equally remarkable, according to the fact observed in the Amicable. In the construction of the village table, and, indeed, of all my theoretical tables, I had assumed the age of 55 years (complete) to be the age at which the rate of increase in the mortality changes from one constant to another, or from 3 per cent. to 8 per cent. for each year of age. The present observation of the Amicable (with which that of the Equitable agrees) shows that instead of 55 the age of 52 complete years is the epoch at which this remarkable change in human life occurs, or rather in the class of life observed. This difference, or a similar difference, had, however, been anticipated by me; for at the time of publishing my "Life Tables," I stated that the age of 55 years was the earliest at which the limit was found in any table of mortality in repute, but that I believed that future observations would show that this limit was receding, and receding in a much greater degree than the infancy limit would be found to be receding. Before the publication of any facts confirmatory of my opinion, I had constructed my principal tables, having the limit of infancy placed one year further back than it had ever been observed. If I had acted further in accordance with my expressed opinion, and removed back the second limit 3 years, I should then have expressed the fact indicated by the Amicable observation. I do not, however, feel any wish that I had proceeded differently in the construction of my theoretical tables, and placed the limit at 52 instead of 55 years of age. I do not regard the retrocession of the limit as permanent and applicable to all classes of life. Moreover the difference (or defect, as it may be called) is in favour of assurance-offices using my tables, affording them a small advantage below the age of 55 years, which such offices ought not to be expected to forego.

The observation of the Equitable agrees with that of the Amicable in indicating 52 years of age as the limit dividing human life into two well-marked periods. Both these observations being in accordance with my theory of mortality, it will hence follow that the relative mortality at different ages is the same in the Equitable as it is in the Amicable; that is to say, taking any two years of age for comparison, whatever is the proportion between the mortalities at these ages in the Amicable, the same proportion will be found existing in the Equitable. The absolute mortality in the two societies, however, is not the same, the mortality in the Amicable at any age being 8 per cent. greater than it is in the Equitable at the same age. On inspection of columns (3) and (4) of table (3), it will be seen how near the fact observed in the Equitable (exclusive of membership under five years) agrees with the village table at ages two years older. Below the age of 53 years the comparison fails, because at the correspondent age, 55 years in the village table, the limit occurs, dividing the higher from the lower rate of increase in the mortality, whilst such limit should have occurred at the age 54 in the village table, in order to render the results immediately comparable with the Equitable observation, whereof the age at which the limit occurs is 52 years. It was not thought necessary to reconstruct the portion of the village table below the age of 55 years, for the purpose of completing this comparison. The desired object will be equally well attained if the reader will bear in mind that the results in column (4), below the age of 50 years, are all to be reduced (8—3) 5 per cent., this being the reduction to be made consequent on putting back the limit one year.

There is, perhaps, no one of the results of the Amicable and Equitable observations more valuable and interesting than that just referred to, fixing the point of junction of the two series at the mean age of 52 complete years, and determining at the same time the relative mortality above and below 50—55 years of age. The resulting relation is different from that indicated by all preceding tables, although it has been anticipated by me. In all former tables the annual rate of increase in the mortality between the ages of

52 and 55 years was 3 per cent., in the present observations of the Amicable and Equitable the annual rate of increase is 8 per cent. in the same years, leaving an excess of 5 per cent. each year. The total excess in the three years of age will consequently amount to 16 per cent. nearly; that is to say, the present observations establish the fact, that the disproportion between the mortalities above and below the age 52—55 years, is 16 per cent. greater than it has been supposed to be. The present is a favourable opportunity for remarking generally, that the comparison of old with recent observations would seem to indicate that the mortality at ages above 55 years has undergone little or no diminution; that the mortality from 10 to 55 years has decreased 15 or 20 per cent., whilst the mortality under 9 years has fallen 30 or 40 per cent.

The results from the observations of the Amicable and Equitable have been found, as has been stated, in accordance with each other, with one exception, viz., that the absolute mortality in the Amicable is at every age 8 per cent. greater than it is at the Equitable. This difference it is difficult to account for satisfactorily, as the classes of people observed and the times of observation were not dissimilar: there does not appear to be any good reason for preferring one statement to the other. The only seeming advantage which the Equitable possesses over the Amicable is in the greater comparative multitude of its facts. But notwithstanding this superiority in numbers, the Equitable results do not better accord with my theory of mortality than do the Amicable results; the chain of connection in the two series of results is the same, and the different parts of each series are consistent with, and are confirmed by, all the other parts of the same series. Whence it is to be inferred, that if there exists any inferiority in the Amicable observation, it does not arise from a deficiency in the number of facts observed, as the consistency of the resulting facts will hardly admit of being increased. Since, then, the two statements are on an equality with respect to their claims to credit and applicability to general purposes, it appeared to me desirable to form a table of mortality intermediate between the statements of the Equitable and Amicable, each statement being allowed equal weight. The results from such compound of statements are found at column (5) of tables (3) and (4). In the adjoining column (6) of the same tables, are placed for comparison the corresponding results from my chief table of "Mean Mortality," with the limit placed at 52 instead of 55 years of age. The coincidence between the two series of results, term for term, is as close as can be desired. During the twelve quinquennial stages from 30 to 90 years of age (which is the whole extent of the observation), the average deviation between the numbers according to fact, and the numbers given by theory, is 2 (2.11) per cent. The maximum deviation is at the age 50 to 55 years, where the change from one constant to another occurs; it there amounts to 7½ per cent., which is twice as great as the deviation at any other quinquennial interval of age. Exclusive of this deviation the average deviation of the remaining eleven quinquennial stages is only 1½ (1.61) per cent.; that is to say, above and below the point of junction, the difference between the results of the theory and the actually observed facts, is represented by the insignificant average deviation of 1½ per cent. With such an extraordinary degree of coincidence, I have every reason to be satisfied with the statements of facts published by Mr. Morgan and Mr. Galloway. It would have been impossible to invent or fabricate facts more consonant with opinions and tables published by me ten years ago.

The numbers in table (4) are derived from the numbers in the preceding table: in table (3) the mortality is shown independently for each quinquennial interval of age; in table (4) is shown the accumulated effect of the mortality in all previous stages, by its operation on an assumed number of living at a given age. The table will be sufficiently intelligible without further explanation. I would wish, however, to direct attention to the two series of actual and theoretical results at extremely high ages, in that part of the table having reference to the Amicable observation. If the theory is to fail any where, it might be expected to fail at extreme ages; nevertheless, it will be easy to show that my theory represents the facts more nearly than does Mr. Galloway's adjusted table at the ages from 80 to 95 years; the fact observed between the ages of 80 and 95 years being included, although it is entitled to no regard, as it rests on only eleven observed deaths. Assuming in all cases the number living at the age of 55 years in the Amicable to be 1000, there would survive at the ages 80, 85, 90 and 95 years respectively, according to the fact observed, 176, 61, 15 and 3; and according to Mr. Galloway's adjusted table, 173, 70, 20, and 3,—the respective deviations from the observed facts being 3, 9, 5, and 0, or 17 in all. On reference to columns (1) and (2) of table (4), it may be seen that at the same ages the corresponding deviations between my theory and the observed facts are, 0, 3, 0, and 1, being 4 in all; that is to say, Mr. Galloway's deviation from the fact at the four extreme ages is represented by 17; whilst that of my theory is represented by 4 only, which is less than one-fourth part of Mr. Galloway's deviation.

(1.)—TABLE exhibiting the Mortality experienced in the *Amicable* Assurance Society during 33 years, ending the 5th April, 1841: the mortality of three classes of members being separately expressed, each being denoted by the proportional numbers who died during successive periods of five years of age, out of a constant number of 100 supposed to be alive at the commencement of each of such periods of age; also, showing the numbers of deaths on which the resulting rates of mortality are respectively founded.

Interval of Age.	Of Members admitted since 5th April, 1808.		Of Members admitted previous to 5th April, 1808, without distinction of duration of Membership.	Mortality per cent. of the Total of Members during the 33 years.	Numbers of Deaths on which annexed results are respectively based.			
	Membership under 5 years. (1)	Membership above 5 years. (2)	(3)	(4)	(1)	(2)	(3)	Total. (4)
30—35	3.65	—	—	3.32	17½	5½		23
35—40	4.83	(3.62)		4.21	27	17	1	45
40—45	4.07	6.27		5.06	21½	44	11	76½
45—50	4.36	7.80	8.14	6.86	18	63	18	99
50—55	5.43	8.98	12.76	9.04	16½	69	46	131½
55—60	8.52	13.46	13.17	12.58	19	89	72	180
60—65	13.88	18.17	22.39	19.78	21½	94	148	263½
65—70	14.25	25.97	26.00	25.12	11½	93½	160	265
70—75		34.14	38.15	37.01	10	75½	199	284½
75—80		48.29	48.14	48.51	2½	51	163	216½
80—85		51.74	66.18	64.31		17	117	134
85—90			73.10	74.93		6½	43	49½
					165	625	978	1768

(2.)—TABLE exhibiting, at successive quinquennial intervals of age, the Rates of Mortality experienced in the *Equitable* Assurance Society during 66 years, to the 1st of January, 1829; distinction being made of three classes of members, arranged according to the length of time they had been members of the Society when their mortality was observed.

Interval of Age.	Dying in Five Years out of 100.				Deaths observed in each Quinquennial Interval.			
	Membership from ½ to 5½ years. (1)	Membership from 5½ to 15½ years. (2)	Membership above 15½ years. (3)	Total. (4)	½ to 5½ (1)	5½ to 15½ (2)	Abv 15½ (3)	Total. (4)
20—25	3.33			3.63	39	10	2	51
25—30	3.50	—		3.64	87	26	1	114
30—35	3.21	4.67		3.79	107	96	4	207
35—40	5.04	5.39	—	5.23	167	180	18	365
40—45	4.65	5.86	7.77	5.62	130	229	66	425
45—50	5.67	6.59	8.32	6.72	120	239	137	496
50—55	8.98	8.99	10.53	9.48	134	262	215	611
55—60	10.30	11.99	13.53	12.32	98	247	294	639
60—65	11.59	15.78	18.34	16.52	61	215	362	638
65—70	19.98	23.89	25.61	24.55	41	195	395	631
70—75	—	31.56	34.41	33.76	—	122	355	477
75—80		47.33	45.44	45.61		41	247	288
80—85		—	52.85	52.85		—	122	122
85—90			68.58	68.58			45	45
					984	1862	2263	5109

(3.)—TABLE representing the Mortality experienced in the *Amicable* and *Equitable* Assurance Societies among their members of more than five years' standing, being the results from combining columns (2) and (3) of the preceding tables; with which are compared results from published theoretical tables which have been constructed on the principle that the rate of mortality increases 8 per cent. each year, under 52—55 years of age, and increases 8 per cent. each year above that age.

Interval of Age.	Amicable.		Equitable.		Amicable & Equitable combined.		Deaths observed.	
	Fact observed.	Village Table at Ages three years older.	Fact observed.	Village Table at Ages two years older.	Fact.	Table of Mean Mortality.	Amicable	Equitable.
30—35	Insuffi-	5.17	4.66	5.02	4.91	4.93	—	100
35—40	cient.	5.96	5.50	5.79	5.73	5.69	—	198
40—45	6.70	6.88	6.17	6.68	6.44	6.57	55	295
45—50	7.85	7.92	7.13	7.70	7.49	7.57	81	376
50—55	10.09	9.53	9.62	9.04	9.85	9.10	115	477
55—60	13.38	13.45	12.77	12.52	13.08	12.87	161	541
60—65	20.50	19.10	17.32	17.82	18.93	18.30	242	577
65—70	25.99	26.73	25.01	25.03	25.50	25.66	253½	590
70—75	37.14	36.64	33.76	34.47	35.47	35.28	274½	477
75—80	48.32	48.80	45.61	46.21	46.98	47.18	214	288
80—85	64.31	62.56	52.85	59.74	58.98	60.80	134	122
85—90	74.93	76.34	68.58	73.68	71.93	74.69	49½	45
							1579½	4086

(4.)—TABLE in connection with the preceding table (3), showing, according to the facts observed in the *Amicable* and *Equitable*, and according to theoretical tables, the proportional numbers which would have survived at different ages relatively to an assumed number of 1000 surviving at the age of 55 years.

Age.	Amicable.		Equitable.		Amicable & Equitable.		Northampton Table of Mortality.	"Village" Table, usually known as the "Carlisle."
	Fact observed.	Village Table at Ages three years older.	Fact observed.	Village Table at Ages two years older.	Fact.	Table of Mean Mortality.		
30	Insuffi-	1445	1409	1427	1430	1421	1791	1395
35	cient.	1371	1344	1355	1350	1351	1638	1329
40	1294	1289	1270	1276	1282	1274	1485	1257
45	1207	1200	1191	1191	1199	1190	1327	1177
50	1112	1105	1106	1099	1109	1100	1167	1092
55	1000	1000	1000	1000	1000	1000	1000	1000
60	866	865	872	875	869	871	833	892
65	689	700	721	719	705	712	667	753
70	510	513	541	539	525	529	503	588
75	320	325	358	353	339	343	340	410
80	166	166	195	190	180	181	192	241
85	59	62	92	76	74	71	76	110
90	15	15	29	20	21	18	19	35
95	3	2	—	3	—	2	2	7

Having now brought to a conclusion my remarks on the valuable facts furnished by the Amicable and Equitable Assurance Societies, the reader must be left to judge for himself, whether or not sufficient evidence has been adduced to show that human mortality is subject to a law, according to age, admitting of being as clearly defined as any law regulating the motion of the heavenly bodies. The reader may consider with himself whether it is at all probable that ordinary tables of mortality, consisting as they do

of a series of crude and undigested numbers, having no apparent connection one with another, could approach so near to tables constructed on the principles of a very simple theory, without the latter being the prototypes of the former, the latter being the universal form which all facts in mortality have a tendency to assume. It is not believed that any argument against the truth and applicability of that theory can be drawn from the slow progress which it has made among the persons who are most qualified to judge of its merits, but who are at the same time most biassed by opposing interests. I may mention, however, that some progress has been made towards the general adoption of this theory. One of my theoretical tables (village mortality) has been used by a London assurance-office, as the basis of all its calculations of mortality, for the last fourteen years. Another of my theoretical tables (mean mortality) has been similarly used by another London assurance-office for more than five years past. The difference between the scales of premiums of offices which do and which do not use my tables, is not perceptible to a casual observer: the difference is ideal rather than actual, the amount of difference being too small to be of any practical effect; but in the principles of construction the difference between my tables and the tables of any other person is as great as it is possible to conceive. In the common tables there is not one number having any apparent or expressed connection with any preceding or succeeding number. In all my tables there is not to be found one number which is not indissolubly bound to every other number in the table by simple and perfectly defined relations. In the common tables the successive decrements of life from one year of age to another are governed by no law, and vary at the caprice of the calculator. In all my tables such decrements from birth to extreme old age are governed by a mathematically expressed law, which produces in the successive results a degree of uniformity or regularity not possible to be surpassed even in imagination.

Fleet-street, London, Sept., 1842.

ON DISEASE OF THE NERVES OF THE FACE.

To the Editor of THE LANCET.

SIR,—I beg to forward you the two following cases of disease of the facial nerves; the first characterised by acute pain in the branches of the fifth pair, the second by palsy of the portio dura. I remain, Sir, your obedient servant,

R. H. SEMPLE, Surgeon.

Islington, Sept. 12, 1842.

Elizabeth Ball, ætat. 54, a healthy-looking woman, an inmate of the Islington workhouse, has generally enjoyed good health, with the exception of suffering occasionally from indigestion, and once, two years since, from an attack of pneumonia. About six weeks ago she first experienced a slight dimness of sight in the right eye, which, however, on examination did not present any peculiar appearance. At that time she also complained of a pricking, shooting pain in the same eye, together with pain in her forehead, face, and right ear. As no morbid appearance could be detected, and no derangement of health was apparent, she was merely recommended to bathe the eye with cold water, which, however, did not afford any relief. Since that time the pain has become gradually worse, and her health has been much impaired.

On re-examination this day, Oct. 13, 1841, the following appearances present themselves. She complains of a shooting, throbbing, burning pain in the right eye, and a sensation, as she expresses it, as if the eyeball were too large for its socket. The same kind of pain extends to the forehead as far as the vertex, backwards to the ear and occiput, and down the neck; to the right side of the nose as far as the external aperture of the right nostril, and to the upper maxillary bone, the pain originating at the situation of the infra-orbitary foramen. The upper eyelid is completely drawn over the ball of the right eye, so as completely to obstruct vision. She has no power to lift it up, and the attempt made to draw up the lid causes excruciating pain and violent action of the orbicularis palpebrarum, which immediately draws down the lid again. The falling of the lid, therefore, is not owing to palsy of the levator palpebræ superioris, but to spasmodic contraction of the orbicularis palpebrarum. When the lid is elevated, though this is done with great difficulty, she is able to see very distinctly; there is, therefore, no disease of the optic nerve, or of any of the structures of the eye itself; and the only peculiar appearance presented by the eye is, that the pupillary aperture is oval instead of round. This last appearance is probably owing to some sympathetic affection of the lenticular ganglion, which supplies the pupil with nerves.

She says that since her illness her hearing on the right side has been impaired; the power of smelling and of taste are, however, quite perfect. The pain in the parts above described is not constant, but subject to violent exacerbations and remissions, and is much increased by pressure on the regions affected. She complains of derangement of her general health; she has a sour taste in her mouth; no thirst whatever, nor any desire for food; she has vomited several times this morning; bowels moderately open; urine scanty and high-coloured; tongue covered with a thick, white fur; pulse 84, regular.

As I thought it expedient to attend to the state of the digestive organs in the first instance, she was ordered the following:—

℞ *Carbonate of magnesia*, gr. x;
Sulphate of magnesia, ℥j;
Mint-water, ℥j.

The draught to be taken every four hours; and a blister applied to the right temple.

Oct. 13. Feels rather better, and on the whole the pains are somewhat diminished. She can open the upper eyelid to the extent of about a quarter of an inch, but with pain and great effort. The eyelid is very tender to the touch. The general health is much improved; tongue much cleaner, but still slightly furred; vomiting has ceased; bowels open; no sour taste in the mouth; pulse 84, regular.

16. Feels much worse; has had no sleep the whole of last night in consequence of incessant pain in the parts above described. As I supposed the symptoms to arise from some inflammatory action at the origin, or in the course of the fifth pair of nerves on the right side, I ordered the following, in the hope of removing the disease through the medium of the circulation:—

℞ *Blue pill*, gr. v.

The pill to be taken twice a-day.

℞ *Tartar-emetic*, gr. ¼;
Sulphate of magnesia, ℥ss;
Infusion of senna, ℥j.

The draught to be taken every four hours.

Seven, p.m. She has taken two doses of the medicine; the first produced no marked effect; the second excited copious vomiting, followed by a violent convulsive fit, attended with foaming at the mouth. On my visit soon after this attack, she was lying in a state of torpor, and could not answer the questions put to her. I could now lift up the right eyelid without apparently exciting any pain, but the eyeball was drawn in different directions by the convulsive action of the recti and obliqui muscles. The pupil contracted and dilated, but its margin was irregular, assuming a somewhat triangular appearance; pulse 100, strong and incompressible. She was bled to sixteen ounces. While the blood was being drawn she was seized with violent attacks of rigidity of all the muscles, which ceased after lasting a few minutes. She appeared now to be only partially sensible, groaned occasionally, and drew her breath heavily and laboriously.

Eleven, p.m. Breathing now hardly perceptible except at intervals, when she takes two or three deep inspirations. There is constant rigidity of both lower extremities; the upper extremities are also rigidly fixed, although now and then relaxed for a short time, as after her deep inspirations, when also their position is often altered: at one time she retains them crossed over the breast, at another lying by her side. At times the arms become quite lax and movable, and may be placed in any position. The rigidity of the lower limbs is more remarkable than that of the upper, the knees becoming flexible for a very short time, about every ten minutes. The lower jaw is firmly closed, and any attempt to draw it down is opposed by the violent contraction of its muscles. The muscles of the face are not rigid, and both the lips and eyelids can be freely drawn in any direction. The pupil of the right eye varies very much in figure, but is never round. There is not much spasm of the muscles of the back or abdomen, though both appear slightly rigid when pressed upon; pulse 80, soft and compressible.

17. The rigidity of the muscles has continued with intermissions throughout the night, during a part of which she was delirious. Blood not buffed or cupped; pulse 80, soft. Since seven o'clock this morning she has been sensible, and answers questions quite rationally. She has now perfect power over all the voluntary muscles, except that she is unable to raise the right eyelid. The pain caused by the attempt to draw it up with the finger is more intense than formerly; tongue dry, and covered with a brown fur; no thirst; skin dry; bowels not relieved since six o'clock last night, when she had a very copious dark fœtid evacuation; has passed no urine for twenty-four hours; breathing natural. The following course was now adopted: a solution of the extract of belladonna (gr. v. to f℥j. of water) was dropped into the eye, poured upon the blistered surface on the right temple, and applied to the whole of the right eyelid and adjacent parts by means of a linen rag. The following was also ordered:—

℞ *Calomel*, gr. ij;
Blue pill, gr. iij.

The pill to be taken every four hours.

In three minutes after the application of the solution of belladonna, as above described, the pain in the eyeball ceased, and she expressed it as being benumbed.

18. Feels rather better. The fits of spasmodic contractions occurred last night nearly every ten minutes, but they ceased at one, a.m., and after that time she had some tranquil sleep. She is now quite sensible; has passed about a pint of urine, which has deposited a copious white sediment, and is very albuminous; pain in the eyeball is less; she says it is benumbed, but exposure to light gives considerable pain; there is pain in the left lumbar region, and in the left hip and thigh; bowels have not been relieved; pulse 76, not full, but rather hard. Ordered to take half an ounce of castor-oil immediately, and to continue the pills.

Eight, p.m. Feels much better; complains of pain in her head and back, but the pains in the other parts are much relieved. The right eyelid can be lifted up without much suffering, but she cannot raise it by her own exertions. The bowels have been opened twice, and the stools are copious and very

dark-coloured. She has made water once; the urine is dark-coloured, of an offensive ammoniacal odour, and deposits no sediment; it gives an abundant precipitate with corrosive sublimate; pulse 80, soft and compressible; tongue and skin dry; she is now quite sensible. The nurse states that she has had three spasmodic fits since the morning, but that they lasted a very short time.

19. Improving; has had no spasm since the last visit; has slept from two to six o'clock this morning; pain in the right eyeball and eyelid diminished, and these parts are less tender on pressure; the attempt to raise the lid by the finger is also less opposed by the action of the muscle, but she is still unable to raise it herself; pulse 80, soft and full; gums rather tender; the urine tested yesterday with corrosive sublimate has deposited a most copious precipitate, and is acid to test paper. The solution of belladonna was again applied to the blistered surface of the right temple. The pills of calomel and blue pill were ordered to be continued.

20. Considerably improved; she has had no spasms during the night; the pain is relieved, and she does not now suffer any inconvenience in any part of the body; the eyelid is still drawn down, and the tenderness of the eyeball remains, but not so remarkably as before. As her urine presented the appearances above described, and as her bowels were not freely opened, she was ordered to take the following:—

℞ *Nitrate of potash*, gr. xx;
Sulphate of magnesia, ℥ss;
Infusion of senna, ℥j.

The draught to be taken every four hours.

℞ *Cream of tartar*, ℥j.

To be taken every six hours.

Under this treatment she rapidly improved; the secretion of urine became natural, the tenderness of the eyeball wholly disappeared, and she regained the perfect power of raising the lid. She was discharged from the infirmary cured on the 26th of November. From that period to the present, an interval of ten months, she has had no return of the disease, and she is now in perfect health, pursuing her ordinary avocations.

I never remember to have seen a case similar to the above, which presents many points of interest to the pathologist and the practitioner. I think there can be little doubt that the opinion I first formed of the nature of the disease was correct; viz., that it was an affection of the fifth pair of nerves. It will be seen that all the parts supplied by the ophthalmic branch of this nerve were acutely painful, and that the pain was also traced to the parts supplied by the superior maxillary and inferior maxillary branches. That the motor branch of this nerve was also affected, at least at one period of the disease, is, I think, proved by the spasmodic closure of the jaws above described. The spasmodic contractions of the muscles of this and other parts of the body, were probably owing to the reflex functions of the nerves; those of sensation being affected in the first instance, and those of motion subsequently. What the precise nature of the organic lesion was in this case, I confess I am unable to say; and it is, perhaps, more easy to prove what it was not, than what it was. It could not have been owing to the pressure of a tumour or spicula of bone upon the root of the nerve, as in this case the symptoms would not have yielded so readily to medical treatment. That it was not owing to inflammation at the base of the brain, may be inferred from the absence of the symptoms indicating that disease. I am inclined to believe that the symptoms were owing to local congestion; an opinion which seems to be strengthened by the fact, that abstraction of blood was the measure which seemed to produce the most decidedly beneficial effects upon the disease. I do not, however, advance this opinion dogmatically, but shall be glad to know whether there are other cases of a similar nature on record which may tend either to confirm or contradict my own view of this curious case.

In the following case, which came under my notice about the same time, the motor nerves of the face were affected.

James Connor, a policeman, who generally enjoys good health. His beat is one on which he is very much exposed to the influence of wet, cold, dirt, rain, and noxious effluvia. About four days ago he first began to perceive a pain in the neck, with stiffness of the muscles of the right side of the face, together with a slight difficulty of speaking, which he feared might be interpreted by his sergeant as the effect of intoxication. Since then he has felt pains running through his right eye and temple, but his general health has been and still continues unimpaired. At present (Oct. 26, 1841,) he exhibits the following appearances:—His right eye is open, and he is able to shut the lids only partially, apparently from want of power over the orbicularis palpebrarum; the upper lid, however, can be brought down by the application of pressure, but immediately rises when pressure is removed. The occipito-frontalis, corrugator supercilii, levator anguli oris of the right side and the right half of the orbicularis oris, are all powerless; but as the corresponding muscles of the other side retain their healthy action, a most ludicrous expression is given to the face in speaking, the left eye and eyebrow being moved to give expression to his words, while the right eye and eyelid are quite motionless, and the left side of the mouth being drawn up while the right remains fixed. He states that in eating he has no power to move the morsel of food from the hollow of the right cheek, owing, no doubt, to palsy of the buccinator, but is obliged to propel it to the other side by

the aid of his fingers, and sometimes the morsel escapes from the right side of the mouth from deficient action of the orbicularis oris. He cannot forcibly close his mouth on the right side, so that when he tries to whistle the right side of the mouth to the middle line is open, while the corresponding part on the other side is shut. When he tries to spit, he is incapable of directing the saliva, because it is immediately poured into the open part of the mouth and escapes. He does not at present complain of any pain, and his general health is good; pulse 100. He was ordered to take the following:—

℞ *Tartar-emetic*, gr. ss;
Infusion of senna, ℥j;
Sulphate of magnesia, ℥ss.

The draught to be taken every four hours.

27. Much the same; he has felt considerable pain in his right eye and behind the ear. The medicine has opened his bowels, and caused him to vomit once; he thinks he has rather more power in the muscles of the right side of the face than he had yesterday; appetite good; no thirst; tongue clean; has slept well.

I now contemplated the application of a blister to the part of the portio dura where that nerve makes its exit from the skull; but the man became alarmed at his condition, and without my knowledge procured admission into the University College Hospital, and was placed under the care of Dr. Thomson. A blister was applied to the spot where I intended to apply it, and the blistered surface was sprinkled with strychnia, and under this treatment the patient rapidly recovered, and is now quite well, having had no return of the complaint.

There is no obscurity in this case, it is one of paralysis of the portio dura; and the obvious treatment consists in attention to the state of the digestive organs, and the application of counter-irritation to the origin of the nerve.

CASE OF SPASMODIC CHOLERA,

DESCRIBED BY THE PATIENT.

ITS DIFFERENCE FROM "ENGLISH CHOLERA." ITS PATHOLOGY. ITS TREATMENT BY LAUDANUM AND STIMULANTS.

To the Editor of THE LANCET.

SIR,—I have lately, by personal experience, gained much additional knowledge of the symptoms and pathology of spasmodic cholera. Indeed, I have very narrowly escaped with my life from an attack of that most appalling disease. On the 22nd of August, at half-past one, a.m., I awoke with an urgent desire to go to stool; but without any griping pain, or much uneasiness. The bowels were at once well washed out; so also was the stomach, by vomiting. After this, at intervals of ten minutes or so, the vomiting and dejections continued, of a bland, clear fluid, much resembling in appearance reddish urine. For about an hour this was accompanied with no pain or great uneasiness, beyond the exertion of vomiting, till about three o'clock, when the vomiting and dejections became so constant that I felt greatly exhausted. About four o'clock I began to suffer with most distressing cramps in the calves of the legs; to such a degree that, though faint and exhausted, I was obliged to jump up on my feet, as rubbing seemed only to aggravate them. I had probably by this time lost upwards of two gallons of fluid. These symptoms continued worse and worse, and about five o'clock I was so perfectly exhausted, that I was wholly unable to rise even when sick: the fluid was literally pumped over the bed at short intervals, the spasmodic action drawing my head and neck backwards, as in opisthotonos, in a truly distressing manner. In short, I could rise for nothing, but was thrown about by the involuntary convulsive action. The fatigue in the diaphragm and muscles of respiration now became so painful, that I could get no breath; and with the sensation of a peculiar stoppage in the ears, I felt as if I was being smothered under water. This continued worse and worse, till the breathing and pulse were imperceptible; though I felt perfectly conscious all the time. About six o'clock (as I understand) I had a good dose of ether and laudanum poured down my throat. This shortly seemed to revive me a little; so I had two more doses of the same within half an hour. The breathing got very slowly and gradually better. The dejections diminished, and ceased wholly about ten o'clock, a.m.; but the vomiting of clear fluid continued, at intervals of a quarter or half an hour, the whole day, and did not cease wholly till about eight o'clock, p.m. Of course the secretions were suspended; there was no urine, and no saliva; the thirst was excessive, as may be imagined. I drank during the day upwards of thirty bottles (two gallons) of soda water and effervescing lemonade, besides large draughts of cold water. The demand for fluid was so great, that I felt and wished I could lie in a field and have a river of beer turned through me. At seven o'clock, p.m., the skin was still black, and the veins plastic; that is, they might be pinched up, and would maintain the form, from the viscidity of the contained blood. I need only further name the impatient restlessness and jactitation from inanition, which gradually subsided in a day or two. I have now enumerated every symptom with somewhat natural force and feeling. The muscles which had been so violently cramped were inflamed and tender for many days afterwards.

I must not forget to mention my condition

prior to the attack. I had suffered a good deal with anxiety and fatigue during the summer, which has been very hot. On the morning of Sunday, the 21st, the day previous to my illness, which was a remarkably hot day, I had been much hurried. Also on sitting down to dinner, I was called away urgently a distance of two miles to see two patients in one house; one with English cholera, and the other with fever. Having prescribed, I dined with the family; but was somewhat affected (sickened) by the effluvium from a stagnant pond, the dining-room windows being wide open on account of the heat. I dined, sparingly enough, on trout, roast beef, and plum-tart; and drank altogether three glasses of wine. My two patients were visitors in the family, and I attribute their indisposition to the same cause as my own; namely, to the effluvia from the stagnant pond.

My temperament is active and irritable. To be particular, probably I am as fair a specimen of the musculo-bilious temperament as can well be.

It is well known that our present name for this disease is a complete misnomer. The word *cholera* can only be applied with propriety to what is too often called the English form of this disease, but which in reality is *no* form of *this* disease at all, but one of a radically different nature;—a bilious form of indigestion, with diarrhœa. But in the spasmodic, or Asiatic, disease, there is nothing like bilious indigestion, and no griping pain in the bowels whatever from first to last. The bowels are simply washed out, as would be the case by injecting warm water into them, saving only that they are washed out by the spontaneous and copious secretion of serous fluid into them. There is no pain or uneasiness till [the secretion occurs in the upper bowels and stomach (for it commences and ceases in the lower bowels first) when the vomiting begins, which becomes eventually most distressing.

The essential pathology of spasmodic cholera is as follows:—The mucous lining membrane of the stomach and bowels (from some unknown cause,—for the necessary expulsion of viroid matter perhaps,) takes on the abnormal action of excreting the serum from the blood. This draining of serum goes on for some time before anything worse occurs; and the first object is to stop it. I know perfectly well by experience how this can be done, and will point out the plan presently. To proceed with the pathology—When the fluids have been drained to a certain extent, the muscular fibrillæ, or fasciculi, being no longer separated and lubricated, but being brought into harsh and immediate contact, such irritability is produced as constitutes involuntary action and cramps, violent in the extreme, till the irritability is exhausted in the state of collapse; for I observed that I had little or no cramps during this state.

I believe that the serum is excreted in order to rid the system of some viroid cause; and I think so, because where this excretion has been stopped the case ends in fever. I have shown that fever is another natural effort to decompose and rid the system of viroid matter.—(See a few numbers back in THE LANCET, I am writing in the country, and therefore cannot refer back.)—Moreover, I have found some patients labouring under cholera, and others under fever, who have been subjected to the same atmosphere and external causes, as shown above.

The method of stopping the excretion of serum in spasmodic cholera is by opium in large doses; but it is useless to give it in the form of pills; for give it how you will, it will be rejected,—and if in pills, long before they are dissolved, so as to be of any use. Now laudanum will act at once; will be kept in contact with the internal coat of the stomach for a time, and when rejected, may be repeated as often as necessary. When there is great prostration, the opiate may be combined with ether. Indeed, stimulants are required from the first. The next object is to resupply the fluid. Nature demands this most peremptorily; for the thirst is beyond endurance. If medical men will simply oppose the symptoms when they understand them, and do what the nature of the disease points out, they cannot go wrong. The reason why the secretions are suspended, is simply because the serum of the blood is drained away; there is no blood to secrete from. So soon as the fluid is resupplied, the secretions are restored; and therefore none of these symptoms need be meddled with, they being understood. But it is of chief importance to understand that spasmodic cholera has no alliance with indigestion,—with English cholera. Indeed, if I were seized with diarrhœa, accompanied with griping pains, I should feel perfectly safe from spasmodic cholera; and the worse the pain, the more safe I should consider myself. To talk of English cholera and the spasmodic disease as degrees of the same affection, betrays a total ignorance of the pathology of the latter. Spasmodic cholera, as before shown, is, essentially, *the excretion of the serum of the blood;* and this ought to give a name to the disease. Dr. Clanny, of Sunderland, named it hyperanthraxis, from the superabundance of carbon. But this is only an ulterior effect. Hyperanthraxis would be a much better name for the town of Newcastle (*over-coal*).

I cannot close this paper without expressing my warmest acknowledgments to my medical neighbours, Mr. Mitchell and Mr. Searle; also to Dr. Hughes, of Guy's Hospital, and Mr. Lavies, of Westminster. Had it not been for their very kind and prompt assistance I must have died. I remain, Sir,

ROBERT STEVENS.

Kennington, Sept. 11, 1842.

IS THE TREATMENT OF CHOLERA EMPIRICAL?

To the Editor of THE LANCET.

SIR,—I have extracted the following case of cholera from my note-book, and although possessing no singularity, yet it may tend to elicit some remarks from my professional brethren, especially as the complaint has been, and is still so prevalent.

Mr. H., a visitor, aged 60, of debilitated constitution, was seized on Sunday last with violent purgings, accompanied with frequent acts of vomiting. The evacuations were of a brown, serous character, and destitute of the least fæcal odour. On visiting him an hour after the attack, I found his countenance of a dark livid hue, bedewed with moisture, and extremely anxious; pulse exceedingly weak; extremities of an icy coldness, and suffering severe cramps. Ordered—

Chalk mixture, with aromatic confection and tincture of opium, 3ss.

Make a draught, to be taken every two hours. Heat and friction to be applied to the legs and feet. The medicine was instantly ejected from the stomach, and the effort consequent thereon produced increased exhaustion. I now administered stimuli in the form of brandy with hot water, and one drachm of laudanum. The change was instantaneous. The vomiting and purging ceased; cramps abated; pulse became fuller and stronger; so that after a few doses of calomel and opium, to guard against any after symptoms, he quite recovered, and left for town on Friday. Is not the treatment of cholera quite empirical? I am, Sir, your obedient servant,

G. FRIEND WHITELEY.

Ramsgate, Sept. 9, 1842.

UNIVERSITY COLLEGE HOSPITAL.

ABSCESS IN THE THIGH MISTAKEN FOR HIP-JOINT DISEASE.

R. N., aged 9, was brought to the hospital August 13th, on account of a swelling which had formed in the right thigh. Upon interrogating the father of the child as to the origin of the complaint, he stated that five years ago the boy was made to undertake a very long walk, during which the little fellow complained of being very tired, and limped a good deal. Since that time he has never walked properly, and his right leg has gradually wasted away. These symptoms were supposed to indicate disease of the hip-joint, and were treated accordingly, by the application of leeches and blisters.

About three months ago a swelling made its appearance about the middle of the thigh, which has been increasing in size ever since. The boy has never complained of much pain, but keeps his knee in the bent position. Upon admission there was a large projection on the outer and middle part of the front of the right thigh, extending upwards towards Poupart's ligament. The veins situated over the swelling were enlarged, as were also those over the iliac region. There was free motion of the thigh in every direction, and no painful sensations were complained of. The whole limb appears smaller than that of the opposite side, and the knee is flexed continually. When the child assumes the erect position the swelling becomes more prominent, and there is distinct fluctuation. A slight impulse is occasioned by the act of coughing.

Upon seeing the child, Mr. Liston made some remarks regarding the different situations in which abscesses usually present themselves in this region of the body. He pointed out that when matter forms within the pelvis, beneath the iliac fascia, it usually makes its appearance superficially beneath the iliac portion of the fascia lata of the thigh, as in the present instance; but that the purulent collection of a psoas abscess generally falls down on the inner side of the femoral vessels, and appears beneath the pubic portion of the fascia lata. That in coxalgia the abscess presents itself near the trochanter major, or in the back part of the thigh; whereas abscesses formed under the superficial fascia of the abdomen present immediately above Poupart's ligament (an instance of which was in the hospital at the time), or close below it, between the two layers of the falciform process of the fascia lata; and that these particular situations in which abscesses present themselves, are those which the healthy anatomy of the parts would lead us to expect.

Mr. Liston remarked, that the present case was certainly not one of hip-joint disease, as the signs of this affection were absent. The limb could be moved in every direction without producing any pain. When the affected limb was laid extended, the length of the two members was the same, and the natural niche of the buttock was not effaced. In cases of coxalgia great pain was often occasioned by abduction of the thigh, by tapping upon the trochanter, or by pressing upon the sole of the foot: in the present case such manipulation gave rise to no complaint.

At his following visit Mr. Liston made an opening into the most prominent part of the swelling with a straight bistoury. A copious discharge of purulent matter followed this incision. A linseed-meal poultice was ordered to be kept applied, and the child to be confined to bed.

After this the discharge gradually became lessened, and the patient left the hospital at the expiration of a month with the abscess nearly healed.

FATTY TUMOUR ON THE BACK. DEEP-SEATED ABSCESS OF NECK.

Mary Stone, ætat. 44, admitted June 8, 1842, an out-patient of the hospital, under Mr. Morton, on account of a tumour situated on the right side of the dorsal vertebræ, about midway between the spine and the scapula. The tumour was as large as a hen's egg, soft and doughy in its feel, and had existed many years, during which it had gradually acquired its present size. She complains of shooting-pains in the tumour, which disturb her rest at night. The skin is adherent to the tumour more than is usually the case in similar swellings; which circumstance is probably owing to the pressure of the shoulder-strap of her stays. An incision about four inches in length was made over the centre of the swelling, and in the course of the fibres of the trapezius muscle. Some dissection was required to uncover the fatty mass, owing to the intimate connexion between it and the superjacent integument. The tumour being removed, and with it some of the fibres of the muscle, a ligature was placed upon a large vessel, which bled freely in the bottom of the wound. Lint dipped in cold water was applied to the wound. In the evening another artery was secured, and the parts brought together with three sutures and the isinglass plaster.

11. As no attempt at reunion by the first intention seems to have been made, the sutures were removed, and simple water-dressing applied over the slips of plaster.

13. No adhesion between the divided surfaces; she complains of feeling generally unwell; occasional rigors, sickness, and want of sleep and appetite; bowels are open by medicine. In a few hours a smart attack of erysipelas supervened, which after a few days yielded to antiphlogistic treatment.

27. The wound in the back has almost healed, but during the last week she has complained of great pain in the left subclavian region, where the skin is of a very dark-red colour, œdematous, hard, and extremely tender under pressure. To use fomentations and poultices.

29. She has been in a great deal of pain; the swelling occupies the whole of the subclavian region, and derives a pulsatile movement from the subclavian artery. The matter is deep, and being firmly bound down by the fascia of the neck, there is no fluctuation. An opening of considerable depth was made on the outer edge of the sterno-mastoid muscle, about one inch above the clavicle, and a quantity of pus permitted to escape. Some bleeding occurred from a small artery running in the inflamed tissues. A piece of lint was inserted into the wound. Apply an emollient poultice.

July 8. Has been much easier since the abscess was opened. Much matter has been discharged.

11. Much better; abscess nearly closed.

16. Discharged cured.

HYDROCELE OF THE CORD. SETON; CURE.

William Lewin, ætat. 7, admitted under Mr. Morton, has been subject to afirm, elastic swelling in the course of the spermatic cord on the left side for some years. The size of the tumour is that of a pigeon's egg; it is unconnected with the testicle, which is felt lower down; and although it extends for some distance within the external abdominal ring, it has no communication with the cavity of the abdomen.

October 20, 1841. The swelling was punctured, and a quantity of clear serum evacuated from it. To take jalap, gr. v.; calomel, gr. ii.; and apply the following lotion:—Two ounces of the acetated liquor of ammonia; a drachm of muriate of ammonia, and twelve ounces of water.

Nov. 1. As the swelling has returned much the same as before, a trocar was introduced into it, and, after withdrawing the fluid it contained, a solution of sulphate of zinc (one drachm to the pint) injected into it.

8. The injection has not had the desired effect; the swelling having assumed its former appearance. A seton of two threads was introduced.

11. Parts are much inflamed, and a good deal swollen. Seton was now withdrawn. To have the following powder to-morrow morning:—Three grains of calomel and eight grains of jalap.

16. Considerable effusion of coagulable lymph into the sac.

26. Discharged quite well.

HYDROCELE—CORD IN FRONT OF SAC.

James Clarke, ætat. 10, admitted May 25, 1842, as an out-patient under Mr. Morton; has laboured under hydrocele of the tunica vaginalis testis for three years. The swelling is of considerable size, and the cord and testis are placed *anterior* to the sac. On this account it was necessary to introduce the trocar on the lateral and posterior surface of the tumour, in order to avoid doing any injury to those structures. An injection was employed of a solution of sulphate of zinc (a drachm to the pint). The water of the hydrocele had been removed by puncture some time before, and a stimulant lotion applied; but these means did not prevent its collecting again.

26. Much pain and swelling of the parts. To take a little opening medicine: foment the parts, and support them on a soft pillow.

30. Doing well.

June 6. Quite well.

HYDROCELE.

Edwin Fincher, ætat. 4, admitted Aug. 24, under Mr. Morton, on account of a hydro-

cele of the tunica vaginalis which has existed one year. The swelling was tapped, and the sulphate of zinc injection used.

26. Considerable swelling of the part, with much pain. A purgative, tepid lotion, and rest.

31. Swelling greatly reduced.

Sept. 6. Discharged cured.

EVIDENCE AT AN INQUEST OF THE HOUSE-SURGEON AT UNIVERSITY COLLEGE HOSPITAL.

To the Editor of THE LANCET.

SIR,—The last week's Number of THE LANCET has just been put into my hand by a friend, in consequence of a charge contained in it, and made by a person subscribing himself "A Layman," against my evidence on the trial of Elizabeth Newark, for the manslaughter of William Oates, at the late sessions of the Central Criminal Court. The principal charge is "indecision." I might have allowed the charge to pass unnoticed as my name has been mis-stated, but that I know many of my friends (as in the case of the gentleman who brought the charge under my notice) will see through the erroneous name the real party accused, I must, therefore, crave a space in your earliest number to vindicate my conduct.

The following are the facts of the case :—William Oates, a stout man, about thirty-two years of age, was admitted into University College Hospital on the night of the 14th of July, suffering, as I learnt from my colleague, who was on duty at the time and admitted him, from erysipelas of the head and face. The next day my colleague called me to see the patient with him, and to give him my opinion on the case. From this time I watched the case daily. There were now very extensive swelling, and redness of the right side of the head, face, and neck, with some discoloration from effusion of blood of the lower eyelid of the same side. The patient was sensible, and attributed his disease to a blow a woman had given him in the eye on the 13th with a key. He was in a very exhausted and depressed state. The disease spread rapidly over the whole of the head, face, and neck, and even over part of the chest; low delirium soon ensued, and on the 19th he died. When I first saw him he stated that he had been drinking porter and gin day and night for (I think) a fortnight, and had not eaten "a quartern loaf" of bread during that period. Moreover, I found that he was an habitual drunkard. At the coroner's inquest held on the body of the deceased my evidence was to this effect:—That deceased died of erysipelas; that he attributed its origin to a blow given him by a woman on the day before his admission; that erysipelas, though frequently following wounds and injuries, was also as frequently idiopathic or spontaneous; that its causes were comparatively little known; that intemperate habits would predispose to it, and render it more dangerous in its effects; that "probably" in this case the blow received had been the exciting cause of erysipelas; intemperance the cause of its fatality. The jury, after a lengthened investigation, returned a verdict of manslaughter against Elizabeth Newark. I found afterwards from further evidence that Oates had received another blow in the face on the same day by a fall from a bench on which he was sitting in a state of intoxication. When the trial of Elizabeth Newark came on, I was called to give my medical evidence. How could I state more than that the blow was "*probably*" the cause of the erysipelas; for I stated nothing *more positive* about it? and upon these grounds:—1st, the frequency of erysipelas occurring idiopathically; 2nd, the possibility of the blow received by the fall having had a share in producing the effects; 3rd, the predisposition to the disease, and that in a formidable character, given by intemperate habits. For the same reasons I could not state at all positively in answer to the court, that the blow given by the prisoner was the cause of death, since to my mind the deceased was much more guilty of suicide than the prisoner of manslaughter. I may have erred, but I spoke the conviction of my mind. This statement of facts I should think will clear me from all blame in the eyes of those competent to judge; and "A Layman" I think had better not meddle in such matters, or form hasty judgments from the meagre and often false reports of a newspaper. Medical knowledge must be allowed to be sometimes inadequate to throw much light on "the causes of death," even by its most learned professors; but I trust in the case in question, I have neither exposed myself to the charge of "deficiency of medical knowledge," making my opinion unworthy of credit, to want of candour in my evidence, nor to puerility with which "A Layman" charges the medical profession in general. I beg pardon for so long a defence, and remain, Sir, your obedient servant,

H. BURFORD NORMAN,
late House-Surgeon to University College Hospital.

Park-street, Bristol, Sept. 8, 1842.

CHLOROSIS IN A BOY.

THERE is at present in the Hospital La Charité, under the care of M. Rayer, a boy labouring under this disease.

THE LANCET.

London, Saturday, September 17, 1842.

A CORRESPONDENT at Bombay has forwarded to us a copy of the *Monthly Times*, published in that Presidency, for July last, in order to draw our attention to a leading article headed "THE MEDICAL BOON," commenting on an alteration recently directed in England to be made in the retiring pensions of medical officers in the army of India. The criticism is one of unmeasured censure on the new regulation, impelled by the view that the alteration is neither what was expected by, nor commensurate with, the claims of the medical department. A summary of the allegations of the journalist will make the question familiar to our professional brethren in this country. The subject is viewed very much in a party light in the *Monthly Times*, that journal being an enthusiastic advocate of one faction in the state, and an energetic declaimer against the other. But putting aside all the expressions to which the political impulses of the editor have given birth, the following are the chief points under discussion, and the manner in which they are viewed and treated.

The *India Journal of Medical Science*, published at Calcutta, June 23rd, 1842, announces that

"The official despatch granting the Boon to the medical service has been received by Lord Ellenborough. It is to be put in orders a month after its receipt at each of the three presidencies.

After 20 years' service, 3 for furlough included	£191
„ 28	300
„ 32	365
„ 35	500
„ 38	700

These are the retiring pensions of the medical officers, and the order is at once denounced in the Bombay newspaper.

"This new piece of legislation (says the editor) is to all intents and purposes a *shabby* measure, and little calculated to relieve the *Court of Directors* from the sarcastic imputation which was cast on them some years ago, that they ventured to try experiments on the medical department, which they dared not practise elsewhere, simply because they believed that department to be too uninfluential to resist. But we acquit the Honourable Court to a great degree on this occasion, for the 'Boon' is clearly of an *Eastern* origin. The *Calcutta Clique* did not patronise the medical service, although it favoured some of its members; and when its claims were pressed on Lord Auckland, it is notorious that he replied that medical officers in India appeared to him to be very well off, when their receipts were contrasted with those of persons of the same profession in England.

"From the first consolidation of the Company's Service, it was an acknowledged principle that a servitude of twenty-two years should entitle the *military* officer to his first rate of pension, while one of seventeen years should assure to the *medical* officer the same privilege. This rule was strictly just, inasmuch as it allowed to *the latter* five years' advantage as a compensation for *the same* extent of time occupied, as well as for the great expense incurred, in his *education*, to fit him for the public service; keeping in view also that while the cadet entered at sixteen years of age, the assistant-surgeon was necessarily precluded from doing so until he had attained the age of twenty-one. But we search in vain for this equitable principle in the new medical regulations, and we demand to know why, after having been acted upon since 1796, it should now be set at nought.

"The 'Boon' to the army abridged two years' service, whereby the *military* officer received his first pension after twenty instead of after twenty-two years; and to entitle the new medical regulation to the appellation of a *Boon*, it should have reduced the *surgeon's* service in a similar proportion, namely, from seventeen to fifteen years and a half. We observe another iniquitous distinction between the military and the medical officer; and, in defiance of the Court of Directors, that their *medical* servants should participate proportionately in all advantages with their *military* officers. From his first to his second stage of service, the military officer has only to serve *four* years (twenty to twenty-four), when he secures a pension of 292*l.* per annum; but the surgeon has now to serve *eight* years (seventeen to twenty-five) before

he obtains his second rate, which even then amounts only to 300*l*. Altogether the scale is most *illiberal* when contrasted with the concessions which have been made to the medical branch of her Majesty's army during the last fifteen years, and even with the generosity of the Court itself to the Indian navy. Upon what principle also is the *medical* officer to serve *twenty-nine* years to obtain the same rate of pension which is granted to a *military chaplain* after *fifteen* years?

"The medical service claimed a boon which would increase their advantages on retirement in the same ratio as the military boon had benefitted the officers of the army. They also claimed a rank corresponding with that of major, in accordance with the Court's promise in 1823, that their service should participate in all advantages in common with the army. That such were their expectations appears in the memorials of Drs. Kennedy, Burnes, &c.; and it is no secret that the Court of Directors, during the chairmanship of Sir James Carnac, favoured their claims. The designation of 'senior surgeon' with the rank, but *without the pay*, of major, after thirty years' service, forms part of the 'Boon!' Surely this looks very like an insult to our old and grave members of the faculty. The Court lately conferred the rank of major on civilians of *eight* years' standing, and through their kindness we may soon witness the interesting anomaly of a man taking precedence, in the public service, of his own grandfather, purely because the latter is a doctor! But this and all the other provisions of this crude and undigested '*Boon*,' require an immediate modification; and we rejoice to think that those now in power are not likely to reject an appeal on the subject."

In India, as in England, the profession is powerless. When, however, we reflect on the position of medical officers in the army, we urge no complaint against those gentlemen for not interfering with the authorities to whom they are subjected. There is no need of increasing the difficulties, or of multiplying the annoyances, of medical men. Charges made against persons in power might soon bring upon the complainants a species of tyranny to which few independent and honest minds would be content to submit. Had the profession in England been true to itself, a remedy might be found *here* for the grievances of our brethren in any quarter of the British dominions; but disunion in our ranks, the conflicting views entertained by medical reformers, the opposition to all change by the monopolists, the want of influence by the profession (caused by disunion) in the Legislature of the country—these have all been elementary sources of our weakness and helplessness, and, so long as they last, will be prolific in producing the bitter fruit which the members of our profession will be compelled, though most unwillingly, to devour, whether at home or abroad.

A CONTRIBUTION TO MEDICAL REFORM.

(From a Correspondent.)

When the question of medical reform is so generally agitated by the public and the profession, in Parliament and out of Parliament, Dudley ought not to be in arrear in contributing its quota. The necessity for a wholesale reform of existing institutions, and practitioners in medicine, would be more satisfactorily maintained by the publication of facts, such as I am about to adduce, than by all the speculative essays that ever have been, or ever will be written. About twelve months ago a person, calling himself Richard Lloyd, settled in Dudley, and, by way of advertising himself to the public, published handbills, which were deposited in every house in the district, a copy of which is here transmitted *verbatim*. *

"An address to the public.

"Mr. Lloyd, M.R.C.S. † (formerly surgeon in the regular army, ‡ recently from the Staffordshire Potteries) takes this, *his only medium*, of informing his friends and the public, that *he has commenced practice in the* several

---

* The document is a curiosity even among the records of quackery, and we therefore comply with our correspondent's wish by publishing it.—Ed. L.

† *Note by Correspondent.*—We have in vain looked over the college list for the name of such a person as Richard Lloyd.

‡ *Idem.*—We have looked over the army and navy lists without discovering any such person as Richard Lloyd.

BRANCHES *of his profession*, High-street, near the Queen's-cross, Dudley, WITH A PARTY, *who has received and completed a liberal medical education*, in conformity to an Act passed in the 55th year of his late Majesty's reign, George III.

"Mr. Lloyd having had considerable experience *in civil and military surgery, and in the practice of physic, both at home and abroad—in the field—in various foreign and British hospitals*, and *also in midwifery*, FOR TWENTY YEARS PAST, to an extent *almost unknown, in point of numbers and uniform success*, has, from these reasons, great confidence that he *will* merit a share of the public patronage and support, which his friends may be assured *it will ever be his study to retain*. Mr. Lloyd begs to say, that he intends to carry out, by promptitude, care, and attention, *a thorough 'medical reform,'* for the benefit of all classes in Dudley and its neighbourhood. This subject seems to occupy the attention not only of medical men, but the public generally, throughout Great Britain: the first contend that 'their rights are invaded in a variety of ways,' which is but too true; yet no efficient scheme to protect the latter from fraud, nor to supply the *medicamental* wants *of the public health*, has, as yet, been acted upon by the profession, nor by any ruling authority: *our plan* of medical reform is *new*, and in principle good, no one can deny.* *We* give gratuitous advice to the afflicted poor each morning from eight to ten o'clock on Saturdays, until six in the evening; and on Sunday mornings from eight to nine, in the evenings from five to seven; and prepare the necessary medicines at druggist's prices.

"When a party, who have purchased medicines of *our* prescribing, and *when any such case may more than ordinary* seem to require medical attendance at home, as far as our time will permit, we will visit them gratuitously, at all reasonable hours, within a proper distance. *Any poor person confined at home by urgent disease on receiving* A CERTIFICATE FROM ANY PHYSICIAN, or minister, *to whatever parish or religious congregation* the invalid may belong, the party may be supplied with medicines *at druggist's prices*, visited, and surgical aid rendered gratuitously. Hence *our* plan is not an imitation of any other, though, apert *to the principles of any pure medical reform*, we hope, *for the good of this neighbourhood*, that it is within the bounds of propriety and professional etiquette; in wishing to age *omne bonum*, however, our friends may rest assured we have no desire to speak professionally of ourselves, for *gesta verbis prævenient*.

"We shall be happy to attend our friends, the public, on the usual terms as are practised in the neighbourhood; and we trust, that by an assiduous discharge of the duties of our profession in all its branches, we shall deserve the confidence of all those who may place themselves under our care.

"N.B.—Physicians' prescriptions and family *receipts* accurately prepared at druggist's prices. None but the best drugs and chemicals are kept."

Such is the precious specimen of a professional advertisement; and, if ever the prosecution of an unqualified practitioner by the Apothecaries' Company was called for, or just, surely so flagrant a case as Mr. Lloyd's deserves to be vigorously put down. The adoption of the plural *we* in the latter part of the handbill is quite unaccountable, and puzzles us to divine who the other persons implied may be, unless his son (who has not even the shadow of a qualification) may be the person. If Mr. Lloyd is practising "*with a party* who has received and completed a liberal education," the name of that *party* has never transpired, although we have seen several bills which are made out by Richard Lloyd alone.

* *Note by Correspondent.*—There is a sudden transition here from the third person singular to the first person plural.

On the Diseases of the Bladder and Prostate Gland. With Plates. By WILLIAM COULSON. Third Edition, revised and corrected. Longman and Co.

IT is not very long since Mr. Coulson's second edition of the valuable and useful work now before us passed through our hands, and received our commendation. To-day another edition has appeared, revised and corrected as we read on the title-page, and greatly improved and enriched by new and important facts, as we discover in perusing its pages. There is no department in surgery of greater importance both to the practitioner and to the patient, than that which Mr. Coulson has selected as the subject of investigation. Knowledge and experience in this branch of surgical science, act as the anodyne and healing wand of Hygeia; ignorance and conceit prostrate the sufferer in the dust, and yield up his vital energies to wretchedness and despair. That Mr. Coulson has performed his task successfully and excellently remains not now to be told, we shall therefore draw the attention of our readers to those parts of the volume in which we perceive that new and useful shoots have been engrafted on the parent stock.

In illustration of the chemical composition of urine, Mr. Coulson has availed himself of

the researches of Mr. John Barry, a practical chemist of superior ability. Referring to the existence of sulphur, phosphorus, chlorine, lime, and magnesia in the vesical fluid, this gentleman remarks:—

"No fact in chemistry is better established than the existence of sulphur in the blood: nor is its existence less certain in urine. There is, however, this remarkable difference between the two:—in the blood very little is in the state of sulphuric acid; while in the fluid derived from that same blood and passed by the kidneys, the greater part of the sulphur is found to be oxidated to its maximum—that is, converted into sulphuric acid—and neutralised. The question then arises, Whence is the requisite oxygen supplied?

"During the circulation of the blood through the lungs, one of the changes there effected is the conversion of part of its carbon into carbonic acid, which is expelled with the breath. In that case, the necessary oxygen being derived from the atmosphere in respiration and not by the skin, it might be asked whether, at the same time, there may not be a surplus of oxygen gas taken up and retained in the blood for appropriation in the glands, and particularly in the kidneys? The exact experiments of Allen and Pepys (Phil. Trans. 1807—9) ascertained a fact which decides that question. They proved that the oxygen received by the lungs is all again expired, including that portion of it which is formed into gaseous carbonic acid. The oxygen, therefore, for the acidification of sulphur within the kidney, must be derived from the blood itself; and if we may hazard a conjecture, probably from substances contained in it, but of no further use in the animal economy. But the decomposition of these substances, by the abstraction of part of their elementary oxygen, must convert *them* also into new compounds. In this way, possibly, that highly azotised body, urea, may be formed; for it seems improbable, in a healthy condition of the glands, that a substance of excrementitious character should be created immediately from the albuminous portion of the blood, unless in cases where albumen is formed in excess."

"*Phosphorus.*—This element of the urine—unlike sulphur—exists only in the state of acid, that is, oxidated to its maximum: at least, it has not been found in any other state in healthy urine. The acid is but partly neutralised by the bases present.

"The connection of phosphorus with the animal economy is interesting, because it forms an essential constituent of the earthy part of bone, fully four-fifths of which consist of phosphate of lime. It is the phosphate of lime, too, which, becoming deposited within the bladder, forms one species of urinary calculi. There is another urinary calculus in which the phosphoric acid is combined with magnesia and ammonia, usually called the 'triple phosphate;' and sometimes both these phosphates are present in the same stone, constituting a third species, denominated the fusible calculus. The formation of these particular deposits is attributed to a deficiency of free acid in the urine.

"*Chlorine.*—Chlorine, as such, is never developed in animal bodies. Where it exists in them, it is usually in combination with sodium, forming common salt;—but sometimes also, in minute quantity, with potassium, forming the chloride of that metal. It also exists in union with hydrogen and ammonia, forming common sal-ammoniac. All these neutral combinations are held dissolved in the urine, and never constitute morbid deposits; because, neither with lime, with magnesia, nor with any other elementary substance present there, does chlorine form an insoluble precipitate. If, however, free muriatic acid—of which chlorine is an elementary part—be habitually evolved within the stomach, as in dyspepsia, one of the consequences may be the formation of calculi or gravel, by the precipitation of the lithic acid which the urine should retain in solution.

"*Lime.*—If to urine, deprived by filtration of its vesical mucus, an excess of caustic ammonia be added, a very bulky precipitate is thrown down. This precipitate (besides a minute quantity of ammonio-phosphate of magnesia) contains the lime in union with phosphoric acid. The supernatant fluid, if evaporated to dryness and incinerated, will be found to yield no more lime: whence it is obvious that if, according to Berzelius's experiment, calcium exists in blood in some other state than lime, this metallic base must become oxidated during its excretion by the kidney.

"Lime is a principal constituent of several kinds of urinary calculi, two of which have been already mentioned. There is a third, the oxalate of lime, or mulberry calculus. Where it does not result from the peculiar character of the food, the occasion of this morbid deposit is the formation of oxalic acid in the living body; possibly from some undue oxidation of carbon within the kidney. So strong is the affinity between lime and oxalic acid, and so great the insolubility of the resulting compound, that the addition of a very minute quantity of oxalic acid occasions in the urine a precipitate of oxalate of lime; because the oxalate, unlike the phosphate of this earth, is not (or at least not to the same extent) soluble in the natural acid of the secreted fluid.

"*Magnesia.*—It is but in small proportion that this earth is found in urine, from which it is precipitable in the state of ammonio-phosphate, along with the phosphate of lime, on the addition of ammonia. A portion, however, of the magnesia remains some time longer in solution; such is the case when the

carbonate of ammonia is employed. If, therefore, immediately after the addition of this reagent, the fluid be filtered, and then allowed to remain two or three days, there will form a few sparkling crystals of the ammonio-phosphate of magnesia. After removal of the magnesia from the solution, no more of it can be discovered by evaporation and incineration. No magnesium, therefore, exists in urine, except in an oxidised state.

"Magnesia, like lime, in combination with phosphoric acid, is one of the constituents of bone earth; but it forms a very small part. As before stated, it is also a principal ingredient of certain urinary calculi, into two species of which it enters. These are the 'triple phosphate,' or ammonio-phosphate of magnesia; and the fusible calculus, consisting of that salt and the phosphate of lime."

Our space does not permit us to publish a more extended extract relative to the interesting question of the composition of the urinary secretion. Although we abstain with a feeling of regret, for the author goes on, in the next place, to consider the various organic products which occasionally form a part of that fluid, under the influence of disease; such as Albumen, Pus, and Blood.

The chapter on Vesical Calculi is much enlarged; an excellent description of these morbid formations is given, together with a clear and succinct view of the symptoms of stone, and of the means to be adopted for its cure. Mr. Coulson canvasses the merits of Lithotomy and Lithotrity, and does not fail to point out the numerous sources of danger and disappointment which attend the latter procedure. We are grieved that he makes no allusion to the valuable and simple operation proposed by Dr. James Arnott, viz., Cystectasy.

The subject of Diseases of the Prostate Gland has also in this edition undergone the especial revision of the author, and has been enriched by much new and additional matter. The chapters on the affections of this organ form the most valuable treatise on these diseases with which we are acquainted. We would willingly have furnished our readers with proofs of our statements, but have already occupied a larger share of our columns than may be altogether just to our correspondents and contributors: we, therefore, conclude our notice of Mr. Coulson's work with a strong recommendation of it to the attention and perusal of our readers.

A Series of Anatomical Sketches and Diagrams, with Descriptions and References. By THOMAS WORMALD and ANDREW MELVILLE M'WHINNIE. 4to. Part 5.

THESE are clever and useful sketches, and well calculated to furnish the student with a good idea of the regions which they represent. They have the advantage, moreover, of being drawn from nature by an accomplished anatomist. The first figure in the part before us, plate 19, displays the heart *in situ*, with the great vessels at the root of the neck. The second figure exhibits the thoracic portion of the sympathetic nerve, the solar plexus, the pneumo-gastric nerve, and the phrenic, with the viscera turned to one side. The third figure indicates the azygos system of veins, with the thoracic duct. The fourth, the portal vein, with the related abdominal organs. And the fifth, the distribution of the portal vein through the liver, together with the fœtal circulation.

The student will find himself amply repaid by his outlay in possessing himself of these excellent sketches and diagrams.

On the Mutual Relations between Anatomy, Physiology, Pathology, and Therapeutics, and the Practice of Medicine; being the Gulstonian Lectures for 1842. By MARSHALL HALL, M.D., F.R.S. Illustrated by Three Engraved Plates. Baillière. 8vo. Pp. 86.

THESE admirable lectures will be read with great interest by every member of our profession. They are intended to illustrate the physiological basis on which all our notions of pathology are founded, and are written in the precise and aphoristic style peculiar to their author. We subjoin one or two extracts on subjects of universal importance. Referring to the injurious consequences arising out of the ingestion of decomposing food, Dr. Hall observes,—

"The baneful effects of venison and game, kept until they are 'high,' are little appreciated by the votaries of epicurism.

"The poisonous effect of ergoted corn is well known.

"But if the morbid effects of unwholesome food are considerable, those of retained excernenda are still more frequent and formidable. If the contents of the intestines be unduly retained, the tongue becomes loaded and the breath tainted, the skin exhales an offensive odour, the urine is high coloured, of morbid smell, and various deposites occur on cooling,—effects which a course of the simplest aperients removes.

"But if the bile be retained in the blood, this fluid, so essential to the well-being of the economy when healthy, becomes a poison. The patient is frequently affected as by a narcotic, and becomes dozy, and even delirious.

"But the deadliest poison of all the retained excernenda is the urine. The suppression of this secretion is followed, in a few days, by coma and convulsions. And when the urine is not suppressed, but the morbid condition of the secretory process is marked by its albuminous character, hemiplegia and epilepsia are too frequently observed.

"But, of all the ingesta and egesta, those accomplished by the lungs are the most immediately essential to life. I propose, therefore, to treat of this subject a little at length in the present lecture."

The following brief paragraph on the treatment of asphyxia, conveys a volume in its grasp:—

"*The Treatment of Asphyxia.*

"The treatment of asphyxia involves an attention both to the functions of respiration and to that of the true spinal marrow.

"The object, doubtless, is to effect a restoration of the respiratory and circulatory functions, the former of which has been arrested by the external conditions of the patient; the latter, by the contact of morbidly-carbonised blood with the capillary vessels of the lungs.

"The *first* thing to be attempted is the restoration of warmth by active friction with warm hands, &c.; the *second*, the imitation of artificial respiration by any means at hand, of which none is better, usually, than the action of alternate pressure and its relaxation, applied to the thorax and abdomen so as to induce expiration first, and inspiration immediately, by the play of the elasticity of the ribs.

"The *third* effort is made by suddenly dashing cold water on the face and general surface, previously warmed by the frictions, in the hope of inducing a more decided inspiration.

"Artificial respiration must be attended to if these measures, very promptly enforced, fail; and unless the proper apparatus be present, the mouth of another person of robust make, is to be applied to that of the asphyxiated person, covered with a handkerchief, the nostrils being closed.

"Then follow *electricity*, &c."

After the specimens of the work which we have quoted, the excitant impulse, we feel that no more is necessary than to leave the motory action to the good judgment of our readers.

QUESTIONS CONCERNING THE FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Does the law in England or Ireland allow that the legal status of a medical man, or of a general practitioner, belongs to him who practises them, because he holds the surgical diploma of the said faculty, while he does not hold any licence in medicine, surgery, or pharmacy from any other medical corporation? The reasons why I put this question are these:—

First. Although the said faculty have chartered powers for licensing to practise surgery and for licensing to practise pharmacy, they have no chartered powers whatever for licensing to practise medicine; and, secondly, that the said faculty are a chartered body, not for England, nor for Ireland, nor for the British colonies, nor even for Scotland, but only for the four Scotch shires of Ayr, Dumbarton, Lanark, and Renfrew.

Secondly. Are the said faculty bound in honour and honesty to inform each man who applies to them for their surgical diploma that in all probability it will not entitle him more than any other person, male or female, to act as accoucheur; that to a certainty it will not entitle him to act any where as physician, and that it will simply entitle him to act as surgeon within the four shires mentioned, and in no other place?

Thirdly. Since the said faculty are not a chartered body for medical teaching, should they be acknowledged as a teaching body by the other medical corporations? Do they practise deception in allowing the public to believe that while the right to be medical teachers is denied by law to unincorporated practitioners, it is by law inherent in them? Are they chargeable with assumption and presumption in representing every one of their members to be a qualified medical teacher because he is a member, and in permitting the title of professor to each of their teaching members? And do they add meanness to assumption and presumption by taking a guinea less per course for their teaching than is received by university professors?

ENSIS.

September, 1842.

THE EX-PROFESSOR HOME.

To the Editor of THE LANCET.

SIR,—On the following paragraph contained in your leader of the 3rd instant, I beg to offer a few remarks, to which I hope you will kindly give publicity, as an act of justice to the party whose character is implicated:—

"Dr. Home, the Edinburgh professor of the practice of physic, has been known for

nearly half a century as the very worst lecturer in Europe."

I fairly admit that in point of delivery Dr. Home had an unpleasant manner. Custom, however, soon familiarised the ears of his pupils to it, and the intrinsic value of his lectures soon so interested those whose minds seem really desirous of obtaining professional knowledge, that in a few weeks they became quite unconscious of the professor's hesitation.

During my four years' study at Edinburgh, from 1815 to 1819, Dr. Home was professor of materia medica, and one of three clinical professors of medicine. His lectures on materia medica were most full, and not only highly prized by the junior students, but also by a large number of seniors, army and naval surgeons, who, after the peace, flocked to the northern capital to obtain the degree of M.D. The class-room at the early hour of eight, a.m., presented to view crowded benches. It was matter of delight to us when the clinical wards came under Dr. Home's care, and from being previously thinly attended soon became filled with admiring students. Many often postponed their period of clinical instruction for the purpose of having the advantage of Dr. Home's lectures.

I have now done a simple act of justice to Dr. Home, whom I only know in the lecture-room, and can only value and esteem as my teacher; any predilection would otherwise be against him, as at my examination he manifested anything but an encouraging manner to me. I cannot speak of Dr. H. as a professor of medicine, although until the infirmities of age may have crept upon him, I cannot but suppose that his lectures on that branch of medical science would have manifested the same good quality as those which it was my good fortune to attend. I am, Sir, your obedient servant,

A Graduate of Edinburgh of 1819.

Bath, Sept. 9, 1842.

THE CARLISLE SQUABBLE.

MR. REEVES AND MR. ELLIOT.

We have received from Mr. Reeves a rejoinder to the reply of Mr. Elliot which appeared in a late number of our Journal, page 754. We are unable to find room for the whole of our correspondent's communication, but we quote the essential parts, in perfect justice to both parties. Mr. Reeves is naturally very much displeased that Mr. Elliot should have ventured to justify his conduct in "enticing a patient from under his care;" he accuses the evidence of Mr. Elliot's friends of being *ex parte*, a fact that cannot be denied; and then fires a broadside at the operation, which we consider to be one of the greatest improvements in surgery suggested by modern times; confirming his statement by some original views of his own relative to tearing the prostate; and banishing from his remembrance the gorget of olden times, and still in use in one of the most successful schools of lithotomy in this country, Norwich. But we leave Mr. Reeves to blow his own "counterblast."

"The operation of lithectasy, any surgeon with his senses about him will condemn, when he considers the great and almost irreparable injury the prostate must suffer from a dilating force in action for many hours together, even though the stone to be extracted should be 'one small one with a notch in it.' Is it not an established rule not to tear or stretch the prostate? and in lithotomy, if the cut made should prove too small, cut again, but by no means stretch, as much injury invariably follows. Sloughing, abscesses, incontinence of urine, &c. &c., are likely to follow cystetectasy; at any rate, the operation did not deserve or warrant the praise Mr. Elliot heaped on it, which induced a deluded father to render up his son as its victim.

"Mr. Irving, the patient's father, on the 3rd instant, gave me the following conclusive evidence:—

"I considered my son Mr. Reeves' patient, till Mr. Elliot sent for and told me that the stone might be taken away by dilating the canal; and at any rate he could make a cure with less danger to life than the old method of cutting; and where life was at stake the safest plan should always be adopted. I never thought of consulting Mr. Elliot till he made the above promise, though I had talked about my son in a friendly way to the doctor of a club I belong to, and asked whether a cure could be made without cutting. By want of confidence in Mr. Reeves, I only meant, as related to the question, whether a cure could be made without cutting? I had been told by persons it might, by taking medicines. My son had an inclination to enter the infirmary, and Mr. Reeves frequently pressed me to decide, as he said 'the sooner I did so the better.'"

The accompanying letter from Mr. Morrison to me will show in what estimation Mr. Elliot's *ex parte* evidence is to be held.

Carlisle Dispensary,
Sept. 5, 1842.

Dear Sir,—I have read your statement in The Lancet of August the 13th; I can corroborate it, inasmuch as I repeatedly heard you tell the young man Irving that you would operate on him at home, but if he thought he would not be comfortable enough at home, that you would get him into the infirmary. I myself have frequently asked

him if he had made up his mind as to whether you should perform the operation at his own house or not. The young man told me, in the presence of two other individuals, that Mr. Elliot had told him he could cure him without cutting, that there were two stones in his bladder, and that he would surely die if he allowed himself to be operated on; and that Mr. Elliot read a statement to him, by which it appeared that seven out of eight persons operated on died. I remain, Sir, yours very truly,

TAYLOR H. MORRISON.

To Wm. Reeves, Esq., Surgeon, &c.

CORRESPONDENTS.

To the Editor.—Sir, Can a medical man legally charge for medicine and attendance? Having summoned a patient to the Court of Requests for refusing to pay his account, in which among other items was a charge of 10s. for a night visit, and 2s. 6d. for medicine supplied in consequence of that visit, I was informed by one of the commissioners that a charge for the visit could not be allowed, if a separate charge was made in the bill for medicine, and that under and by virtue of a recent Act of Parliament. As I very much doubt the legality of this decision, may I beg you will take an early opportunity of satisfying my doubts. Your obedient servant, O. P. Q.—*** The commissioner was wrong. It was distinctly laid down by Lord Tenterden, in the case of *Handey and Henson*, that distinct charges might be made by a legally-qualified practitioner for visits, or attendance, *and* medicines.—ED. L.

Drury.—We know nothing of the pecuniary arrangements of the parties, and they cannot constitute a matter of public interest. We believe that Mr. W. is a worthy person, and regret that he should at last have put his foot into such a graveyard. The green sod ought not to deceive him. The dissolution of all bodies in that soil is rapidly effected. Even metallic ones speedily dissolve there, and leave not a trace of them behind, to gratify the inquiring eye of the exhumator. If our correspondent feels assured that his friend has become a "victim," why not apply to him personally? We cannot discuss the affair in our columns. The man of Manchester is awake.

Q may consult "Jervis on the Office of Coroner." The Counties-Palatine act under specific regulations in elections to the office of coroner, these being in variance with the general law on the subject.

To the Editor.—Sir, When called upon to make a post-mortem examination of a body admitted into a hospital *after* death, and to give evidence upon it at an inquest, is the house-surgeon of that hospital, he being the examiner and witness, entitled to any fee for his trouble and attendance; and what is the legal amount of that fee? I am, Sir, your obedient servant, A CONSTANT READER.—*** Provided it has been made in conformity with the provisions of the Medical-Witnesses' Act, he is entitled to the highest fee for the examination and the attendance at the inquest, the law awarding as that fee the sum of two guineas. The claim does not extend to cases in which the death has taken place in the hospital, the party having been a patient in that institution.—ED. L.

We have received so many letters on the subject of the communication inserted last week at p. 817, on the practice of surgery in England, by persons who do not possess the documentary papers called "Surgical Diplomas," that it is impossible to find place for a fourth part of them. The question, therefore, which has already been repeatedly and most fully discussed by correspondents in this Journal, must rest at ease between this and the next session of Parliament.

Scrutator.—If Mr. Cornelius Fletcher is only a druggist, and not a *legally*-qualified medical practitioner, the coroner (although that functionary might ask him questions, after any fashion, and receive his evidence, on any branch of medicine or chemistry,) could not charge the county funds with the fee under the Medical Witnesses' Act, on account of that evidence, without being guilty of an error which he is very unlikely to have committed. In the report sent, there is certainly no question recorded which the witness might not have been competent to answer correctly.

Question.—I received a coroner's order to make a post-mortem examination and give evidence, next day, which I accordingly did. The coroner requiring other witnesses adjourned to another day, and ordered me to be again present. I was, and underwent another examination. In that case was I entitled to more than two guineas?—*Ans.* No.

Creta sends his letter on the day that we go to press. Such criticisms should follow immediately the appearance of the things criticised, or the effervescence departs; and the draught would be flat champagne next week on the palates of our readers.

Veritas, next week.—For very many letters which have reached us recently we have not yet been able to find room.

Mr. Gibson.—The cases are not sufficiently important for publication.

Mr. Bradley should address himself to Dr. Watson at the Middlesex Hospital, or to Dr. Taylor at University College Hospital.

Erratum.—"Mr. Gulliver on the Blood Corpuscles of the Ibex."—In the last LANCET, p. 831, these corpuscles are said to be "intermediate in size between the corpuscles of the goat and those of the *ibex*;" for which read that they are—intermediate in size between the corpuscles of the goat and those of the *musk deer*.